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For the Maryland Farmer.

Our London Letter.

CROP PROSPECTS OF THE WORLD.

Regular Correspondence.

LONDON, England, May 24, 1882.

During the past week the weather has been brilliantly fine and dry, with strong, easterly winds and cold, frosty nights; yesterday the air was more southerly and softer, as it is this morning. It is difficult for those who live in towns to realize that what appears to them such splendid weather should be other than beneficial to the growing crops, and any statement to the contrary is—perhaps not unnaturally attributed to that constitutional spirit of grumbling which is supposed to be innate with agriculturists. Nevertheless, a week of harsh, withering, easterly winds, with scorching suns by day and white frosts by night, will not be considered by farmers to have improved crop prospects in respect to any of the cereals. Very little progress has been made by vegetation as compared with the previous week, and the tendency of the week's weather on the wheat crop is distinctly in the direction of forcing the plant into ear on a stunted growth of straw. Notwithstanding their thickness on the ground the best wheats are spiry, and the fields do not improve to the eye in walking into them, whilst for the rest a particularly small bulk of straw would now appear inevitable. The spring corn wants more rain and warmer nights, and none of the cereals are in a better condition than

they were a week ago. The trade for native wheat remains dull and languid, but rates have not declined for good milling samples. Country flour has become weaker in value, and occasionally less money has been accepted. In other descriptions of home-grown grain and pulse there has been no change during the week.

The latest estimate of the wheat crop in Australia are to the effect that the wheat is about five bushels per acre, over the whole colony, which would give an exportable surplus of 154,000 tons, or 14,000 tons in excess of the exportable surplus of last year.

A telegram from Madrid, dated Friday, states that according to official reports there is prospective failure of the wheat crop in only four provinces, whereas, in forty-one other provinces are good. The Government has therefore decided not to suspend the duties on imported breadstuffs which was erroneously stated to have been done.

Crop prospects in southern Russia continue to be reported unfavorably in the absence of rain.

In the rest of Europe, prospects of the wheat crop are good, rain is wanted in France. Markets for breadstuffs quiet throughout Europe.

It is reported that Messrs. Bell & Sons, of Glasgow, importers of dead meat from America, have abandoned the trade. The reason given for this important step is, that at current prices for beef in New York and in this country, it did not pay to import dead meat. The average price for some time back realized here for sides of American beef has been under 12 cents per lb. Keeping in view the prices on the other side of the water, the meat has latterly been sent to Britain at a loss. Beefsteaks are said to be selling at 30 cts. per lb. in New York.

A Proper Compliment to an English Agriculturist.

We are glad to see by the *London Times*, that our correspondent, J. B. Lawes, F. R. S., L. L. D. has lately been created a baronet. Dr. Lawes has, for years, assisted by Dr. Gilbert, been engaged in making valuable experiments on an expensive scale and under critically scientific skill, on his princely estate of Rothamstead. The *Times* in announcing this compliment to Dr. Lawes has a long article upon the long and valuable services that he has rendered to agriculture, from which we make the following extracts:

"In the commencement of his experiments, among other subjects, the effect of bones as a manure on land occupied his attention for some time. A friend and neighbor, the then Lord Dacre, particularly directed his notice to the fact that bones were very variable in their effect in different soils. Several hundred experiments were accordingly made, some upon crops in the field and others with plants in pots, in which the constituents found in the ashes of plants as well as others were supplied in various states of combination. Striking results were gained from these experiments, in which the neutral phosphate of lime in bones, bone-ash and apatite were rendered soluble by means of sulphuric acid and the mixture applied for root crops. The results obtained on a small scale in 1837-8-9 were such as to lead to more extensive trials in the field in 1840-1, and to the final taking out of a patent early in 1842. This being done, Mr. Lawes established large works in the neighborhood of London for the manufacture of super-phosphate of lime, by which name the manure is known which has produced such a revolution in the science of agriculture.

* * * * *

"Rothamsted is situated some twenty-five miles from London, in Herts, and is easily accessible to visitors, Harpenden being the railway station. Mr. Lawes' manor-house is a remarkably fine specimen of old English architecture, and the demesne surrounding it contains some magnificent timber, including an avenue of limes which, for size and regularity of dimensions are perhaps unsurpassed in the south of Eng-

land. Around the family mansion lie the 500 acres which form the experimental station of agricultural research, with which Mr. Lawes' name is so intimately connected. It is not only entirely maintained by him, but he has further set apart a sum of £10,000 and certain areas of land for the continuance of the investigations after his death. The staff of skilled and scientific labor is very considerable, including often three chemists, two or three general assistants, a botanical assistant with several boys under his supervision, three computers and record keepers, and a large, permanent laboratory staff. There are now stored in the laboratory about 30,000 bottles of samples of experimentally grown vegetable produce, animal products, ashes and soils. The field and feeding experiments, including the making and application of manures, the measurement of plots, the harvesting of crops, the taking of samples, the preparation of them for preservation or analysis, all these involve the employment of a large quantity of agricultural labor. In this connection it may be mentioned that Mr. Lawes, for the benefit of his laborers, formed some years ago an allotment club, through which small gardens about the eighth of an acre can be rented. For this purpose 15 acres of land have been allocated, and the total number of allotment gardens now in cultivation is 174. A club house is erected on the allotment area.

"The scientific discovery around which all Mr. Lawes' subsequent work centred, was the disproof of Baron Liebig's celebrated mineral-ash theory. At the time the Rothamsted experiments commenced it was generally supposed that certain saline bodies, so-called mineral constituents were essential to the growth and development of the plant, and that such substances must be furnished to it by the soil. The necessity of a certain quantity of a certain quantity of nitrogen was also recognized, but was imagined since wild plants could thrive without any artificial supply of nitrogen, that a sufficient amount of this element existed in the atmosphere to render it unnecessary to take any steps for increasing this supply. In fact, the absolute necessity of the presence of nitrogen (naturally or artificially supplied,) in land in order to maintain the fertility of the soil was the cardinal discovery made by Mr. Lawes. Formerly, it was supposed that the fertility of a soil might be main-

tained for an indefinite period if the different mineral constituents carried off by the crop were annually returned in due quantity as mineral manure to the soil. This theory only embraced part of the truth. In his last work upon "Fertility," Mr. Lawes thus speaks of the great problem of the sources of nitrogen:—

"I maintain that the amount of nitrogen supplied to our crops from the atmosphere, whether as combined nitrogen brought down by rain or that absorbed by the soil, or the plant, constitutes but a very small proportion of the total amount they assimilate; and that the soil itself (or manure) is practically the main source of their supply. Indeed, it is a question whether on arable land, as much or more may not be lost by drainage or otherwise than is supplied by the atmosphere."

"The field experiments on which these principles rest have, indeed, formed Mr. Lawes' principal work. Favored by position and circumstance, he has been enabled to carry out on a large scale most important operations. It would be impossible to go into the subject exhaustively. Commencing in 1843, 14 acres, divided into about 20 plots, were devoted to experiments in wheat, and seven acres divided into 24 plots, to experiments upon turnips. Subsequently, similar experiments were made upon beans, clover, barley, and the mixed herbage of permanent meadow land. The general plan was to select fields in a condition of agricultural exhaustion—*i. e.*, in a state in which a fresh supply of manure was needed to fit the soil for the growth of another crop. Upon this exhausted soil each of the most important crops in the rotation were grown year after year upon this same spot, both without manure, and with many different descriptions of manure, each of which was, as a rule, applied yearly to the same plot. Thus it became impossible to determine the point of relative exhaustion or excessive supply of any of the constituents of the manure. What has now been grown at Rothamsted for 38 years in succession, turnips (with an interval of three years,) for 25 years, barley for thirty years, and so on. The practical value of these experiments is obvious from one fact—that, taking the results of, say 20 years, the annual average produce in bushels of wheat per acre, with-

out manure was 16½, with farm yard manure exactly double, and with artificial manure 35½ bushels. Mr. Lawes, however, soon found that much remained to be done in perfecting the methods of chemical analysis before comparative analyses could afford much assistance in determining the relative productiveness of different soils, and to this he applied himself with great skill and success. Even after all his investigation Mr. Lawes believes that the elucidation of agricultural principles must be looked for from a due consideration of vegetable physiology as well as chemistry, of the special functional peculiarities and resources of different plants, as well as their actual percentage composition.

"The explanation of the distinctive functions of crops grown in rotation, he contends, are found in the character and length of life of the different plant; in the character of the roots in regard to number, range, size, &c., and to their aptitude to derive more of their food and moisture from the surface or from the sub-soil; finally in the greater capacity of some for liberating and assimilating food not available for others, or for arresting food which would otherwise be washed out of the soil."

For the Maryland Farmer

The Compost Heap.

The excrement of all animals is usually denominated manure. There are also very many substances, which, while of themselves would not be termed manures, possess high manurial value, and for which reason they ought not to be allowed to go to waste. These substances are comprised in all waste material of an animal or vegetable nature, and when properly brought together form the compost heap. Is the dwelling surrounded by shade trees, then the fallen foliage is one of the substances that may be incorporated; or if preferred this can be used for bedding in the stables to mix with the manure. Without particularizing, all decaying vegetable matter, chip dirt, weeds, the refuse from the cellar, and all such substances, should be brought together.

There are special modes of preparing compost heaps of manure, mineral fertilizers, etc., but our compost heap is to contain only what might otherwise remain unappropriated. In the first place we would obtain sods and earth sufficient for

a foundation and to give shape to the heap, then put on any of the substances above named as they are obtained, and if an animal dies, even though it be no larger than a fowl let that be thrown in and covered with earth or road wash to prevent the escape of any of the ammonia or gases arising from the natural decay of animal matter.

When the cellar is cleaned in the spring, let all the rubbish, such as refuse turnips, beets, onions, potatoes and cabbage stubs be also added.

During house cleaning when the white-wash kettle is brought into requisition, do not forget to throw the remainder of the wash upon the heap, as it will add to its fertility and help retain the escaping gases if any.

If situated sufficiently near the dwelling, as it should be, the contents of the wash-tub should be applied, and as the heap increases in size, additions of muck or turf should occasionally be made to absorb the wash water and retain its manure elements.

It is not necessary to go into every particular as regards the additions to be made, for any farmer who has once made up his mind to form a compost heap of such loose materials as have been left to decay where they chance to be, will be sure to make everything count.

As is well known, it is the atmosphere that assists the process of decomposition and decay, and therefore in order that this process may be as rapid and successful as possible, it will become necessary that the material of which the compost is composed be occasionally forked over whereby it becomes more thoroughly mixed, and from its exposure to the air decomposition hastened.

It must be understood that the contents of such a compost as has been described will not possess as great fertilizing power as stable manure for all purposes, but there are very many different ways in which fertilizers are employed and very frequently for a crop that does not require as strong forcing as with manure, this substance will serve even a better purpose, produce a better crop and so save the manure for some other and more desirable application.

Another point to be considered is, that such a portion of the material, it need not consume any great amount of extra time in its accumulation, especially in all cases

of cleaning up, for when once got together, it must be removed somewhere, and might as well, and far better too, to the compost heap, than as is frequently the case, to the side of the highway where it becomes a nuisance, rather than being employed as a source of advantage to the farm.

WILLIAM H. YEOMANS.

Columbia Conn.

For the Maryland Farmer:

The Hay Harvest

Is, or should be one of the most important ones on the farm, and no farming is at all complete without plenty of hay, and good clover or other grass sods to utilize as the basis for improving the fertility of the farm. It has not been many years since hay, home grown, was very, very scarce throughout most of our Southern States, and even now many of our farmers might profitably raise much more hay than they do at present. While "corn blades" are most excellent provender for horses, it can never entirely take the place of good hay, for good, clean timothy cannot be excelled, and no doubt not equalled for a provender for driving horses. While it is not every piece of farm land that will profitably produce timothy, which requires strong soil, it can soon be made suitable, if manure, either green manure, (clover sod, buckwheat &c.) or from the stable or barn yard, it is practiced for a couple of years. For shipping purposes, timothy undoubtedly pays the farmers best to raise, for it commands a ready sale at good prices when properly baled and having been cured and harvested in the best possible manner.

There is a great deal of good meadow land (not marshy or low,) which could profitably be made into a clover or a timothy patch, paying far better than leaving the piece grow up to the natural short and soft grasses, and then pasturing it down to secure the profit from the piece of ground.

Of course we do not mean to say that such ground is better adapted to the successful growth of these grasses than other pieces of ground, but merely give them as being desirable on account of being able to realize more profit by seeding to cultivated grasses than by permitting the piece to run to the natural growth of vegetation which is usually relied upon in such places

in most of the Southern States.

It is almost too late in the season to speak of harvesting, but we can advise our readers who have full barns not to feed too lavishly as good hay will be worth marketing ere long, owing to the warm, dry spell during last August. E. Jr.,

Ensilage.

12th May, 1882.

Editor Md. Farmer.—Dear Sir—I notice in the May number of the *Maryland Farmer* an article on ensilage from Mr. A. L. Taveau, that has been read by me with a great deal of interest, as the idea of storing pea vines in a silo, *without* cutting them, is a new idea to me, and if this can be successfully done is of immense importance to the ensilagist, as I find pea vine one of the most valuable kinds of food for stock; the pea vine is also the best and easiest crop to grow for ensilage, and as it leaves the land in much better condition after the crop than any other crop I know of, by shading the land and the roots rotting in the land and also loosening the land to a considerable depth, &c.

The great objection to pea vines is that they are extremely expensive to handle and get through the cutting machine, as I have found that about 4 or 5 loads of corn fodder can be cut in the same time that one load of pea vines can be cut, this is my observation though I have not made the test by trying.

Now I would like to ask Mr. Taveau, Jr., the following important questions concerning his experience with the peavines. At what stage was the vine in when they were harvested, were the peas sown broadcast, if so, how many bushels per acre were sown, also were the vines running, when cut, or did he find them much tangled or hard to handle. Also, please state if the stock ate the stems of the vines as well as the other parts; was the color of the vines changed; did not the ensilage smell or taste acid.

I tried a silo of corn fodder, last winter, 17½ feet long and 11½ feet wide, and about 10 feet deep, and was very well pleased with the results, but would much prefer to grow the peavine for the ensilage, also would rather have the pea vine for feed or at least would prefer it mixed, and would be much obliged if you would forward this

letter to Mr. Taveau, at once, as I would like to hear from him before I plant my crop of peas.

Our season for last month has been rather dry, fine stand of cotton and the farmers are getting it in a fine condition. Small grain promises fine. Wheat is rusting on the head, but think we will have a fine crop. Oats and barley never better.

Yours most respectfully,

J. C. STRIBLING.

The following is the reply to the above.

Messrs Editors.—My attention having been called to the above remarks and queries of your esteemed correspondent, with reference to the use of Pea vines for ensilage; and I shall take pleasure in imparting to him whatever information I may have gained from my limited experience in the use of the same; and will reply to his several questions in the order in which they appear.

Seeding was commenced about the last week of April, upon an early fallow, at the rate of one bushel per acre, thoroughly worked under with a riding cultivator, and, afterwards, gone over with a smoothing harrow. I here recommend the use of a spring tooth harrow; in which case, the smoothing harrow could be dispensed with, as the spring tooth harrow would work up the soil thoroughly, besides leaving it smooth and level.

The stage of growth in which the crop was, at the time of cutting, was that of full bloom, and was selected, rather with a view of turning under the greater portion for fallow, for former experience had developed the fact that if it was permitted to run to vines it was almost an impossibility for any plow to turn them under properly; and upon this account, cutting was commenced before the vines had attained their full growth, and were, consequently, very delicate, and packed as closely as was desirous.

As a regular food for stock, during the winter, I do not think it can be equaled; for when fed to sheep, and cattle, they devour every portion, including the stems.

When taken from the silo, it had the appearance of having been steamed; and, in fact, it had been stored away quite warm, and I might say, taken out in the same conditions, with the addition of a strong odor; which, although not disagreeable, was exceedingly strong, imparting the

same to whatever came in contact with it.

I am under the impression that Peas, or clover, for ensilage, are far preferable to corn; as either are by no means as exhaustive to the soil as corn; but, on the contrary, rather leaves the land in better condition for further cropping.

Having occupied more of your space and attention than I anticipated, I shall conclude with the hope that the above may prove of interest to your correspondent.

A. S. TAVEAU JR.,

ENSILAGE.—There is much controversy in regard to the value of ensilage. In a practical question of this kind, experience is of more value than hypothesis. In the *Massachusetts Ploughman*, Benjamin P. Ware (who we know to be careful of his statements and strictly conscientious in all he says) sums up his results of feeding ensilage during the past winter, in a letter to that paper, and from which we briefly extract the following remarks:

"On the 21st of April, I finished feeding ensilage to my cattle, having for five months fed to my cows sixty pounds of ensilage per day, composed of green corn cut when the ears had formed, and on some of them the grain was in the milk. With this was mixed a portion of rowan, cut and put in the silo also green. With this quantity was fed to the cows giving milk, three quarts of cotton seed meal, and no hay or anything else during the five months.

"I then began to feed English hay of fine quality, instead of ensilage, giving in addition the same quantity of cotton seed meal. After one week feeding thus, I carefully weighed the hay consumed. My object was to give the cows all they would eat of both ensilage and hay, and to learn the value of ensilage for food when compared with hay at market price as the standard. I found that the cows, in addition to the cotton-seed meal, would eat sixteen pounds of hay each per day on an average in a herd of five cows against sixty pounds of ensilage; and I found by measurement that the herd shrunk in the quantity of milk nine per cent, on hay from that of ensilage. I do not discover any special change in the condition of the stock by the change in the feed. They are and have been looking well all winter.

"By this experiment I find that sixty

pounds of ensilage is equal in feeding value with 16 pounds of English hay. And calling the hay worth twenty dollars per ton, would make the ensilage worth six dollars and sixty-six cents per ton, and as a milk producer nine per cent. more, which would amount to seven dollars and twenty-six cents per ton for ensilage, as compared with hay at twenty dollars per ton."

From Mr. Ware's remarks we further glean that land which would produce two tons of hay, per acre, would, in his opinion, produce at least twenty tons of ensilage corn, thus securing about three times the feeding value over the same quantity of land in hay.—*Mr. Saunders in National Tribune.*

Dried Fodder and Fruits.

To the Editor Massachusetts Ploughman :

In the *Ploughman* of May 6th is an article by James R. Nichols on dried fodder and fruits. There are some things I cannot well agree with him upon.

Drying fodder of any kind is nothing more nor less than a make shift to bridge over to the growing season again. Fodder dried is not nearly as valuable as green grass. Grass that grows in June will make double the beef, milk and butter, and of better quality, than the same amount of grass dried into hay. Any man who is obliged to use brain and muscle in connection, as I am, knows this to be a fact. As Mr. Nichols says, the question is, what is lost in drying? A great deal is lost. He says that which evaporates in drying is pure water. No one will doubt that; but place this same water back again and it has a big value. That is where it is. And if the water can be kept in the grass through the winter, milk can be made a great deal cheaper than it is now. If we try to raise corn and vegetable by generated heat, without sun or air, we should fail every time. The sun and air are necessary to their development; so, also, is this water essential to give value to the constituents of the grass; dry out this water, and much of the substances that are valuable remain dormant, as the earth would without sun and air.

I find that grass cut early in the morning, while the dew is on, makes better hay than if cut when the dew is off; it doesn't scorch and burn so, but dries more gradual. Mine

is all cut for the day by half-past eight; the swaths are then shaken up, and the tedder kept going until noon. In this way the hay does not crumble up. It is essential that hay should not be exposed to the sun's rays any longer than is actually necessary. The same is true in regard to manure spread upon the surface—the quicker it can be covered up the better, whatever any one may say to the contrary, for these are facts proved by one who has had to paddle his own canoe.

If there is anything I hate to cure it is clover; it takes so long a time to make it without a loss of the leaves and a risk of getting it wet. I shall have two acres of clover; it looks very promising at this time. I shall place it in a silo that I built in one corner of my barn cellar, in March. I am rather short in barn room, and in doing this way, I shall gain four tons' capacity of room, which will be quite an item, besides a great saving of value. Now I have a half acre of rye—shall commence to cut to feed out on May 16th. When I feed this rye the milk increases over the best of clover hay, with the same amount of grain. Why is this so?

J. F.

Billerica, Mass.

POULTRY HOUSE.

Raising Ducks.

While plenty of water is not objectionable, except in the case of the very small ducklings, hundreds can be annually raised where the water has to be supplied artificially. Where there is a small stream near the house it can be used for the ducks, or enough of it can be diverted from its source to make a small artificial pond, which is, perhaps the best.

There are hundreds of farmers who might raise large flocks of ducks, annually, if they would make the effort, and the profits could not help but be satisfactory, if the birds were properly managed. As ducks get most of their living off the grass, they are profitable to raise where there is no small fruit. Any little, low, shed like houses will do for ducks, and the only thing to keep them properly is to keep the place clean and well supplied with straw or fine hay as a bedding.

The domestic duck is not supposed to

be an exemplary sitter. She requires more care when she sits, for, as she cannot go to her food like the hen, attention must be paid to place it before her, and she will be contented with it, whatever the quality. It has even been remarked that when ducks are too well fed they will not sit well; but even if they do, another serious objection is brought against them, and that is, when the eggs are hatched the duck mother will strike a bee line for the first pond, puddle or stream with her brood, regardless of consequence, and is apt to stay in the water until the young ducklings are "wet through," then many of them die of chills and cramps.

All these reasons often induce poultry keepers to have duck eggs hatched by hens, and being more assiduous than ducks, these foster-mothers take an affection for the young, to watch over which, requires close attention, because, as these are unable to accompany them on the water, for which they show the greatest propensity as soon as released from the shell, they follow the mother hen on dry land, and get a little hardy before they venture into the water without any guide.

Ducks are easily kept, from the shell. After they have passed the critical period, like chicks and poults, they are industrious foragers, and thrive rapidly. Their keen appetite, capacious craws and strong digestive organs, enable them to assimilate any kind of coarse or refuse food. It is best to restrict them in their liberty until they are four or five weeks old, and supply them up to that time with very little, if any, more water than they need for drinking purposes, and there will be several more ducks raised.

Their food for the first few weeks may be crumbled bread sopped in milk, oatmeal or barley meal cake with milk, and cooked corn meal and nettle leaves chopped fine, to which milk may be added. When they are from three to four weeks old, barley or oats thrown into water may be given for a change. The great thing in pushing the birds along is always to have some food in their crops, and directly they become tired of one kind of food, at once change it and so induce them to eat, as the more they consume the faster they grow and the earlier they are fit for the table.

At six or seven months old a well kept duck makes a toothsome viand for the best

of tables. Myriads of them are readily sold in the fall at remunerative prices, and all through the cold season they are in constant demand in our city markets.—*Poultry Editor in Farmers Magazine and Rural Guide.*

Whole Wheat for Fowls.

There is more solid nutriment in whole wheat, as a feed for poultry, than in any of the cereals, weight for weight. It is an excellent kind of grain for this use, though somewhat more expensive than other sorts; but too much of this hearty feed is detrimental, particularly when carelessly fed to Cochins, Brahmas, etc.

Fowls are partial to wheat. It helps the laying capacity of hens, but it should not be used except with discretion as to the quantity allowed them daily. An excess of this raw grain will induce a looseness in the bowels very frequently. It is easy of digestion, and should be furnished in moderation, as a needful and most desirable variety, in conjunction with other dry grains, such as cracked corn, oats, barley, buckwheat, etc.

If not more than one-third or one-fourth wheat is allowed with the other cereals mentioned, for ordinary purposes in laying season, hens will do quite as well, and they can thus be kept in better average condition than by a greater allowance. We have proved this by frequent experiments in feeding.—*The Poultry Nation.*

THE DAIRY.

For the Maryland Farmer.

Why we Churn.

The popular idea of churning has been for years, that the butter globules were surrounded by a membrane of peculiar organism, formed by the casein of the milk, and that churning was for the purpose of rupturing this envelope, so that the fatty matters might be allowed to adhere to each other by the peculiar affinity or attraction they have for each other when liberated, and thus forms the mass or churning of butter.

Then the question was brought up, why that sour cream "come" so much sooner than the sweet; and the answer was, that

the acidity of the cream destroyed in part this supposed or theoretical membrane, and it was all the more easily broken. This membrane always has been one of conjectural existence, and why it ever had an existence, when the simple experiment of burying cream in the earth, in a porous sack would result in butter, the milk or rather the serums being absorbed by the soil, leaving the larger globules, or whatever state cream may be in, behind; but as these envelopes would remain, encasing the butter globules, it would not yet be butter, from the fact that these "shots of butter" could not adhere.

Of late, the manufacture of hard cheese has brought out a machine for making false cream from the emulsification, or complete mixing of lard in 30 times its bulk or weight of skim milk, and with this machine it is possible to imitate whole milk, and the after raising of cream, and certainly there is no caseinous envelope in this case, though the fatty globules exhibit the same appearance of butter globules, covered with their envelopes of casein.

Driven from the membrane theory, it is now brought forward with some show of authority, that the butter exists in the milk in a liquid form, or state, and does not solidify until afterwards. If milk is examined as soon as the cream has commenced to appear, the microscope will show a shining, buttery mass, and no signs of solidification, or the globular state, can be found until the cream has descended in temperature below the freezing point. If this cream is agitated by regular churning, the microscope reveals that form, soon begins to take place, and instead of the creamery, or shiny appearance, they begin to become rough, and the spherical form is lost. As the churning goes on, this roughness increases, and the cream begins to thicken, which is the cream attaching itself, one particle with another, and at last, there is a "breaking up" or a more sudden chemical change, more complete solidification sets in, the separation of the serums, casein and the other constituent parts ensues, and we have separate butter.

Butter that refuses to come, is simply exhibiting a state of repulsion, a suspension of the adhesiveness of quick coming cream, and does not present that "agglutination" that it should. This adhesiveness may be made to order by raising the temperature

of the cream to a point which will compel them to adhere, but as this temperature also affects other elements and combinations which also exists in the cream, the butter will have that actual worthless look, that white, waxy and soft butter so often has, when none of the conditions of manufacture are observed. Scalding milk in the fall to make it come better, is only this same "heroic treatment," but it is not carried beyond a certain stage of temperature and hence little harm is done, perhaps, under most circumstances, none.

But what causes butter globules to adhere when agitated, is a matter of speculation rather than actual knowledge. It is very easy to say that they are in a condition of "agglutination," but this matter that "glues" them is as yet wholly brain matter. A substance that has been named "hydrate of casein" and thought to be liberated by the agitation of the casein is credited now with being this uniting power. Once the idea was that remaining vestiges of the buttermilk that can soon be expelled from the butter, acted as an attracting force, but even the scientific men of the dairy world find that cream has no seeming rules to govern it in its production and care.

If this theory of liquid cream and hydrate of casein is true, the letting of cream stand until sour is only to save labor in churning, by awaiting a development of this "hydrate" by some unexplained chemical process, and when the agitation of the cream takes place, this substance is liberated, and being absorbed by the fatty matters of the cream, the separation takes place, and a brief moment of thought, aided by theory, to give them authority, will tell why we churn. J. G.

OHIO, April, 1882.

For the Maryland Farmer.

Milk Test of Jersey Cows.

Enclosed find tests of three more of my herd. I am especially proud of the 19½ month old heifer, Soekel D., she bids fair so make a wonderful record, as she is growing finely, is of good form and undoubtedly cut out for work. You will note that Belmeda is the 4th daughter of superb 1956, that have done above the average in my herd. Princes Sheila had a record of 14 lbs. when I bought her, she increases it 1½ lbs. She came in season the latter part

of the week, which I think took off from the cream some, as for the first 3½ days she made 7 lbs. 15 oz.

SOEKEL D 12887, sire Superb 1956, dam Soekel 2d 2959, nineteen and a half months old:

	Milk.	Milk.	Cream.
May 2, A. M.	11 lbs.	P. M. 10½ lbs.	6½ lbs.
" 3, "	11½ "	" 11 "	6½ "
" 4, "	11½ "	" 10½ "	6 "
" 5, "	11½ "	" 10½ "	6 "
" 6, "	11½ "	" 10½ "	6 "
" 7, "	11 "	" 10½ "	6½ "
" 8, "	11 "	" 10½ "	6½ "
Total.....	78½ lbs.	74 lbs.	43½ lbs.
Butter for the week.....	9 lbs.	11 ozs.	

BELMEDA 6229, sire Superb, 1956, dam Orphean, 4636, five years old:

	Milk.	Milk.	Cream.
May 14,		P. M. 17½ lbs.	4 lbs.
" 15, A. M.	18½ lbs.	" 17½ "	8½ "
" 16, "	18 "	" 17½ "	8½ "
" 17, "	17½ "	" 16 "	8½ "
" 18, "	17½ "	" 17 "	8 "
" 19, "	17½ "	" 17 "	8½ "
" 20, "	17½ "	" 16½ "	8 "
" 21, "	17 "	" .. "	4 "
Total.....	122½ lbs.	119 lbs.	57 lbs.
Butter for the week.....	14 lbs.	9 ozs.	

PRINCES SHEILA 7297, four years old, sire Champion of America 1567, dam Elsie Burnside, 5598:

	Milk.	Milk.	Cream.
May 14,		P. M. 18 lbs.	4½ lbs.
" 15, A. M.	19½ lbs.	" 19 "	8½ "
" 16, "	20 "	" 20 "	8½ "
" 17, "	20½ "	" 20 "	8½ "
" 18, "	20 "	" 19½ "	8½ "
" 19, "	19½ "	" 20½ "	8½ "
" 20, "	20 "	" 19½ "	8½ "
" 21, "	20 "	" .. "	4½ "
Total.....	139½ lbs.	136½ lbs.	60½ lbs.
Butter for week.....	15 lbs.	8 ozs.	

Respectfully yours,

G. R. DYKEMAN.

Shippensburg, May 29, 1882.

"It has more than realized my expectations," says Professor DUGAN CAMPBELL, M. D., LL D., President Royal College Physicians and Surgeons; Member General Council University of Edinburgh, etc., of the Liebig Co's Coca Beef Tonic.

Invaluable for debility, weak lungs, biliousness, dyspepsia, female - complaints, asthma, malaria liver complaint, sick headache. Beware of counterfeits.

What Milk do Cows Give.

Cows that are compelled to perform much muscular labor as going far to pasture, or to roam over a large area in order to find a supply of food, or to climb mountainous pastures, will be found to give milk deficient in butter, with an increase in casein. So when cows are poorly sheltered from the cold and exposed to driving winds, the butter and sugar of their milk is consumed by the respiratory process in the effort of nature to keep warm. The cattle of Switzerland, which pasture in exposed situations and are obliged to use much muscular exertion, yield a very small quantity of butter, but a large proportion of cheese; yet the same cattle when stall fed furnish a large amount of butter and very little cheese. The kind, quality and quantity of food supplied to the cow, together with atmospheric influences and general surroundings, have much to do with the character of the milk produced.—*Food and Health.*

Skim-Milk and Flaxseed for Calves.

Skim milk and grass alone will raise good calves, if the milk is abundant and not allowed to get too sour. When too sour, it causes calves to scour, and thus counteracts its good effect. Skim-milk is well adapted to raising heifers for the dairy, as it is rich in albuminoids and phosphate of lime, to give a strong muscular and bony development. A little more oil would improve it, and for this purpose flaxseed is a cheap addition, effectually replacing the cream skimmed off. The large percentage of oil it contains prevents constipation, as well as scouring. Flaxseed should be boiled in four times its bulk of water, and it then forms a gelatinous mass. A little of this—say, a tablespoonful of the jelly—mixed with warm skim-milk, is enough for a calf from one to three weeks old. As the calf grows older, this amount is increased.

If oil meal is used, it should be linseed meal, and not cotton-seed meal, for calves. Cotton-seed meal is not so easy of digestion—is rather constipating—thus adds to this quality in skim-milk. With the skim-milk and flaxseed we raised grade Jersey heifer calves to five hundred pounds' weight at six and seven months old, last season. It is doubtful if they would have been better fed on new milk. When the milk becomes short, linseed meal may very profitably be added.—*N. Live Stock Journal.*

Farm Work for July.

This month is usually the harvest month in the Middle States, but owing to the favorable season for the rye, wheat and grass crops, harvest is no doubt nearly over, but the corn crop being late will tax the full energies of the farmer, who has also a hay harvest, and tobacco with other crops requiring immediate attention. No farmer or farm hand can afford to idle away a moment during, busy, hot July.

Corn Crop.

For this crop we repeat what we have often said, stir the ground with cultivators once every six or ten days, keep the land clear of weeds and grass, and give level culture always. Stop working as soon as it begins to tassel and at last working sow cow peas, one bushel to the acre, and sow, broadcast, plaster at the rate of one or one and a half bushels per acre.

Broadcast Corn.

Sow a few acres of corn on rich, ground, plowed deep and harrowed well. Sow three bushels, if broadcast, but we prefer drilling it in drills, three feet apart, and 10 or 12 grains to the foot in the drill. Cultivate it two or three times and you will have a heavy crop of fodder, or for ensilage—for either purpose cut it when the ears are forming, or before the stalks get hard.

Millet.

Millet may be seeded up to the 10th of the month—a light, rich, sandy loam or an alluvial is the soil best adapted to its growth. But any soil will grow millet except a stiff clay, provided it is properly cultivated. Sow broadcast.

Quantity of Seed to the Acre.—When for hay, sow one bushel to the acre, when for grain sow only three pecks to the acre.

Time of Cutting.—Cut as soon as about one-third of the seed begins to turn yellow. If allowed to get dead ripe, the loss by shattering is very great.

Buckwheat.

Buckwheat may be put in the ground up to the 10th of this month. The haulm is not very nutritious, especially when compared with millet or broadcast corn; but the value of the grain when ground into meal is too well known to lovers of buckwheat cakes, to need any eulogy from us.

Preparation of the Soil.—Manure liberally. If fertilizers are used, spread broadcast and plough lightly under. Sow the seed and harrow well, Sow one bushel of seed to the acre.

Time of Cutting.—Cut when one half of the grain begins to turn black. If intended for forage only, cut as soon as the plant comes into bloom.

Fall Potatoes.

Keep the vines well hoed and cultivated. See that the soil is kept perfectly free of weeds, and as loose and open as possible. Potatoes will not grow well in a close, compact soil. If any further fertilizers are needed to increase the vigor of the growing plants, scatter over the drills a mixture of ten bushels of wood ashes, one bushel of plaster, and one of the cheapest sort of salt. This will suffice for an acre.

Kill the Colorado bug by doses of Paris Green or Royal Purple, mixed with plaster or common flour, or in the liquid state. Directions for proportions go with the packages of this sure remedy. Remember that both are deadly poisons to man and beast as well as to the bug. Use it on nothing but potatoes.

Sheep.

To prevent the sheep from being afflicted by the worms that infest their heads, provide a trough under cover in the pasture and spread over the bottom of it, three times a week, as much tar as will cover it, and over the tar sprinkle a layer of salt. In getting at the tar the sheep will smear their nostrils and thus prevent the fly from laying its eggs in the latter.

Caterpillars.

Examine the fruit trees for caterpillars and destroy them.

Budding and Inoculating.

The proper season for budding and inoculating plum, cherry, apple and pear trees is during this month. The exact time for doing this work is when the bark parts easily and freely from the wood.

Mangels, Ruta Bagas, Beets, &c.

Keep these free of weeds and frequently hoed.

Farm Implements.

Kemp's Patent Manure Spreader, Pulverizer and Cart combined, a cut of which is given in the next column.

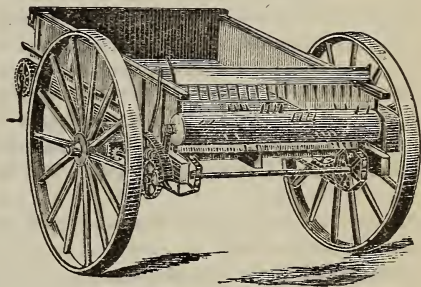
We consider this the best and most useful labor-saving machine for distributing manure that a farmer can possess. It can be quickly attached to the forward wheels of any ordinary wagon. "It takes the coarsest manure and applies it perfectly to the field, without the trouble and loss of time in composting," distributing the manure more evenly than can be done by hand with the fork or shovel, every square inch of surface receiving

its proportion of manure. It saves time and labor to a great extent. Those who have used it claim that it will do the work of six men and do better work. This spreader has received the commendation of President Stockbridge, of the Massachusetts Agricultural College and other prominent agriculturists. The manufacturers thus speak of it.

"The principle of the Kemp Manure Spreader is, that it is a substantial cart of the strongest construction, containing thirty bushels, or about one-third of a cord.

The floor of the cart is a revolving apron, which is carried backward by the gearing, bringing its contents against a rapidly revolving beater, which finely breaks up and distributes the manure.

It is thrown into gear by a single lever at the left hand of the driver's seat, and throws itself out of gear when the load is spent.



In running to and from the field none of its machinery is in motion, and it may be used the season through the same as an ordinary cart. It needs no special adjustment for different kinds of work.

It will thoroughly and evenly spread all kinds of manure found upon the farm, from the roughest and toughest, down to the finest, and the time required to spread a load is from one and a half to two minutes without manual labor.

It can be regulated to spread different quantities of manure to the acre. The farmer may know just how much manure he is using, without the trouble of measuring his field and his manure pile. It can be accurately regulated to spread any number of bushels of ashes to the acre."

Ever anxious to bring before the public eye whatever we deem likely to further the interests of farmers and save labor, and help to increase profits, we cannot overlook this machine. It is manufactured by the Kemp & Burpee Company, Syracuse, N. Y. See advertisement in this number of the **MARYLAND FARMER**.

We also mention a *Paris' Green and Plaster Sower* as a great help to the potato grower, a new invention, and among the best we have seen, especially for a small field, shown us recently by Mr. Gaddess, of 170 Biddle street, Baltimore. Mr. G. invented and used it last year with great success and has this year put it on the market. The price will be very low.

Garden Work for July.

The operations in the garden for this month are:—

Preparation of Cabbage Beds.—In preparing beds for setting out cabbage plants, see that they are liberally manured and well spaded. The soil cannot be made too rich for cabbage, and upon the depth to which it is dug and its capacity for absorbing and retaining a moderate degree of moisture, the excellence of this common but most useful vegetable will largely depend.

Setting out Cabbage Plants.—Choose a moist, cloudy, day, or on one which there is a soft rain, and when either occurs set out the plant in rows three feet apart and thirty inches distant from each other in the rows. The best cabbages for winter use are Drumheads, Flat Dutch and Savoy's—the latter being in some respects the best of all.

Lettuce.—Set out plants to mature and sow more seed for later crops.

Melons, Canteloupes, Cymbkins, Cucumbers, &c.—See that these are kept well hoed and free of weeds. Water freely after sunset in dry weather.

Mangoes.—By the 10th of the month sow a bed of melons for mangoes.

Cucumbers.—Towards the close of the month prepare a bed and sow the seed of cucumbers for pickling.

Bunch Beans.—Plant a few rows of bunch beans every ten days, to follow the maturing crops of this fine vegetable.

Endives.—Set out such plants as are already large enough, and sow fresh seed for a late crop.

Cauliflower and Broccoli.—Set out cauliflower and broccoli plants for fall and winter use. Wait as in the case of cabbage plants, for a rainy day or else plant after the sun sets. When the planting is done, water freely and always do the same in dry weather.

Celery.—Plant out celery for fall and winter use.

Pot and Medicinal Herbs.—Gather these in dry weather. Dry them under cover. Put them, when dry, in paper bags, and label them carefully.

Garden Peas.—Choose a shady bed, and plant a few rows of peas early in the month for later use.

Watering.—In a garden of moderate size provide an oil hogshead, put into it a quantity of rich stable manure to about one-third of the capacity of the hogshead. Fill it up with water, rain water is the best of all—and draw from it as required for watering vegetables. The hogshead may be filled with water two or three times before the manure needs to be taken out and replaced.

Publications Received.

THE HORSE, by Peter Howden, published by the Orange Judd Company, 651 Broadway, New York, and sold by Cushings & Bailey, Baltimore, Md. 12mo, Price, post-paid, \$1.00.

This little work of 130 pages of nicely printed matter is quite a valuable addition to live-stock literature. It tells *how to buy and sell a horse*. Explains the legal meaning of *Warranty* and its use. It abounds in valuable hints as to the points and defects in an animal, and much practical information to enlighten the inexperienced in horse trading or in buying or selling.

ANNUAL REPORT of North Carolina Agricultural Experiment station, for 1881. It is very full of facts in regard to home made fertilizers, manures for different crops, &c.

BRIGHTS DISEASE.—Its Curability.—By Seth Pancoast, M. D.—A very neatly printed book of 150 pages, for sale by the author, Philadelphia, Pa., Price \$1.00. There is much comfort and hope very plausibly held out in the pages of this well written book, to all who are sufferers or imagine themselves to be, of this terrible complaint. Strange that it has been known to the profession only of late years, and has become recently so fashionable. We are no doctors, but think it is only the old kidney complaint under a new name and mysterious title.

THANKS to T. S. Gold, Esq., Secretary of Connecticut Board of Agriculture and Experiment Station, for the report of 1881. This is the 15th Annual Report of the Board, printed by the State. It is a large book of 400 pages printed in good type and on fine paper, well bound it seems to be full of very valuable information, and as soon as we have the time will give it a careful perusal. At present, we can

say it reflects credit upon the Secretary, for ability and industry, and the State for its liberality toward agriculture.

HOW TO SELECT COWS ON THE GUENON SYSTEM.—Simplified, explained and practically applied, by Willis P. Hazard, Secretary of the Pennsylvania Guenon Commission, including the report of the Pa. G. C. To be had of the author, West Chester, Pa. Price, free by mail, 50 cents, and 75 cents for cloth binding. This excellent treatise is well printed and contains nearly 100 illustrations, and should be in the hands of every stock breeder and cow owner in the whole country. It will well repay its cost and more than repay a careful perusal. We are believers in the doctrine that nature most generally gives a mark or sign (if it can be ascertained,) that foreshadows the characteristics of her offspring, whether it be man or beast, bird or vegetable.

BEES AND HONEY—or the Management of an Apiary for Profit and Pleasure, by Thomas G. Newman, editor of the "American Bee Journal," Chicago, Ill.

This third edition of the work has been carefully re-written by the author for the information of the many who are now becoming interested in the pursuit of bee-keeping. It contains 100 profusely illustrated pages, "is fully up with the times" in all the various improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey bee and at the same time produce the most honey in its best and most attractive condition. Chief among the new chapters are "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. Price, bound in cloth, 75 cents; in paper covers, 50 cents, postpaid.

Catalogues Received.

From the Continental Company of Horticulture, General Manager, Mr. Lucien Linden, Ghent, (Belgium,) 52 Rue de Chaume, their catalogue illustrated with wood cuts and a fine colored engraving, of new plants and flowers, fruit and ornamental trees and shrubs. Our European nurserymen and florists are beginning to wake up in the ornamental typography and general make up of their catalogues, but still are a long way behind their cousins in Yankee land in the beauty and attractive appearance of these annual advertisements of what is offered to the public by prominent horticulturists.

Catalogue of Turnip Seeds and Cabbage, &c., for 1882, from Robert Buist, Jr., Philadelphia, Pa.

Journalistic.

Contents *North American Review* for June, published at No. 30 LaFayette Place, New York: The Currency of the Future, Senator W. B. Allison; A Memorandum at a Venture, Walt Whitman; Andover and Creed Subscription, Rev. Dr. L. W. Bacon; Mongolian Immigration, George F. Seward; Old School Medicine and Homopathy. Prof. J. W. Dowling; Swedenburg, O. B. Forkingham; Has Land a Value, Isaac L. Rice; An Unconstitutional Militia, Charles E. Lydecker.

PENNSYLVANIA FARMER—Is the title of a new monthly paper, published at Mercer, Pa., at \$1 per year. The number we have seen does credit to the judgment of its editors and to their ability. It is neatly printed and in handsome form.

THE SOUTHERN CULTIVATOR.—The June number of the *Southern Cultivator and Dixie Farmer* is on our table. The publishers are evidently exerting themselves to make each succeeding number better than any before it, and certainly they are succeeding. This number is equal to a large book, (to purchase which, would cost the price of *THE CULTIVATOR* for a whole year,) in quantity of excellent reading matter. It is literally "brim full" of good things, so varied, that the father, mother and children of a family may each find something to entertain them.

THE SOUTHERN PLANTER.—We are glad to see by its announcement in its issue for 15th of June, that the old and reliable *Southern Planter* will hereafter appear in its old form of monthly magazine at \$1.25 per year. We wish it the highest prosperity upon its return to its first love, after the several freaks of changes it has of late indulged. The *PLANTER* is published by T. W. Ormond, at Richmond, Va., with C. W. Knight, editor, and A. J. Gary as business manager.

THE RESULTS OF NECESSITY.—What the ancients suffered for the want of knowledge in medical science can only be appreciated by contrasting the vast amount of suffering cured and pain alleviated in modern times, by the use of Swayne's Ointment for skin diseases. Its introduction was characterized by the necessary withdrawal of a score or more of illusive, quack nostrums, whose evil effects have left living monuments to denounce them. Thus is exemplified the proverb, Necessity is the mother of Invention,

HORTICULTURAL.

Bananas and Plantains.

A pound of bananas contains more nutriment than three pounds of potatoes, while as a food it is in every sense of the word far superior to the best wheaten bread. An acre of ground planted with bananas will return, according to Humboldt, as much food material as thirty-three acres of wheat, or over a hundred acres of potatoes.

The banana—it should be called plantain, for until lately there was no such word as banana—is divided into several varieties, all of which are used for food. The plantino mazonito is a small, delicate fruit, neither longer nor stouter than a lady's forefinger. It is the most delicious and prized of all the varieties of the plantain.

El plantino guineo, called by us the banana, is probably more in demand than any other kind. It is subdivided into different varieties, the principal of which are the yellow and purple bananas that we see for sale in our markets; but the latter is so little esteemed by the natives of the tropics that it is seldom eaten by them.

El plantino grande—known to us as simply the plantain—is also subdivided into varieties, which are known by their savor and their size. The kind that reaches our market is almost ten inches long, yet on the Isthmus of Darien there are plantains that grow from eighteen to twenty-two inches. They are never eaten raw, but are either boiled or roasted, or are prepared as preserves.—*New Orleans Democrat.*

Dried Fruits.

At present we export to Europe about 6,000,000 pounds of evaporated apples. The process is extremely simple. The fruit is "cored" and sliced into pieces one-sixteenth of an inch in thickness; it is then exposed to sulphur fumes, which arrest all fermentation, and then to a dry and hot blast of air, which reduces it to about half its original weight. The sulphur fumigation prevents the fruit from becoming dark, and after drying it is almost as white as when first cut. Simple as is this process, it costs about twice as much as drying the fruit in the sun, but such is the saving in weight and flavor that it is preferred, and evaporated apples sell to-day in the European markets for fifteen cents a pound.

Uses of the Sunflower.

The sunflower is a native of South America, and grows six or more feet in height. It possesses many valuable properties, which are applied to useful purposes. The flowers yield a fine yellow dye, which is said to be lasting. They are also a favorable resort for bees, and a superior honey and wax is thus obtained. The seeds are greedily eaten by poultry of all kinds, and are very fattening. They contain 20 per cent. of oil, which is yielded by expression. This oil is bland and edible, makes a fine, soft quality of soap, and burns well. The plant is much cultivated in Russia for the sake of the oil, and the resultant cake is considered highly nutritious as food for cattle. The shelled seed is ground into a flour, which makes very good cake and bread. The leaves, manufactured into cigars, have pectoral qualities when smoked. The stalks when treated like hemp, produce a fine, silky fiber, which is said to be fitted for working up with silk. The ashes of the burnt stalks yield 10 per cent. of potash. As a field crop its culture is similar to that for Indian corn. Fifty bushels can be produced on an acre. Sunflower plantations are said to be specially efficacious in destroying malaria, but the assertion is not supported by comparative experiments. All plants are more or less conducive to this end, especially those of rapid growth and possessing ample foliage.

SPRUCE GUM.—Forty thousand dollars' worth of chewing gum is gathered in the State of Maine every year. In Oxford county is a man who makes it his business to collect spruce gum. Every year he buys from seven to nine tons. The gum is found chiefly in the region about Umbagog Lake and about Rangely Lakes. A number of men do nothing else in the winter season except collect gum. With snowshoes, axe, and a Sheboygan, on which is packed the gum, they spend days and nights in the woods. The clear, pure lumps of gum are sold in their native state, the best bringing one dollar per pound.—*Scientific American.*

Don't Die in the House.

Ask Druggists for "Rough on Rats." It clears out rats, mice, bed-bugs, roaches, vermin, flies ants, insects. 15 cents per box.

Sheep in Orchards.

A correspondent in the *Country Gentleman* so clearly shows the benefit of sheep in orchards that we cannot do better than give what he says here: "The orchard occupies thirty-two acres, and is made the run of thirty hogs and 150 or 200 sheep and lambs during summer. Enough grain and bran is given them to place them in good condition. They eat every blade of grass and green thing close down and every fallen apple as soon as dropped, for which purpose sheep are better than hogs, which sleep so soundly as not to hear an apple fall; but the sheep are always on hand, and devour every one as soon as it touches the ground. The fruit each year grows fairer, with fewer wormy specimens, and the manure from feeding so much grain has given a healthy growth to the trees. To prevent the animals from gnawing the bark, the trunks are washed once a month with a mixture of soapsuds, whale-oil soap, and sheep manure. If the animals are given a constant supply of fresh water they have less disposition to eat the bark. The profits of this treatment consist in placing the sheep in the best condition, in finely-growing lambs, and in heavy crops of fruit for market.

THE NEXT ENSILAGE CONGRESS—Will be held in New York Wednesday, Jan. 24, 1883, and continue four days.

The object in making this early announcement is, that Farmers with practical knowledge and experience with ensilage may be prepared with a written statement of their various operations, which shall include the actual measurements and weights as they apply to land cultivated, manures, fertilizers, and seed used, and product per acre; the cost for labor, teams, and power per ton of ensilage; and the comparative gain or loss in weight or product of milk and butter as compared to the feeding of hay or other dried fodder. *The reports to be as concise as possible.* It is requested also that specimens of the simplest farm book-keeping be presented, and preparation made for a full discussion of the economies of mechanics and improved methods relating to agriculture by men who know how to make farming pay. For particulars apply to J. B. Brown, Secretary of Ensilage Congress of 1882, 55 Beekman St., New York.

How to Water in a Drought.

In the summer droughts which now and then occur it is common to see persons everywhere at work watering the garden to keep things alive till the regular rains come. It is, however, the experience of all that the more the garden is watered the more it wants, and thus on the whole it does little good. Yet water can be so given as to be free from this objection. It is the hardening of the surface which causes the evil, and a hard, compact surface always dries out faster than a loose one. The proper way is to take the earth away for a few inches around the plant to be watered, so as to make a sort of basin, and into this pour the water, letting it gradually soak away. After it has all disappeared and the surface get a little dry then draw the earth back again which had been displaced to make the basin. This will make a loose surface over the watered part, which will preserve it from drying out rapidly. Tomatoes, egg plants, cabbages and other plants of this character watered in this way will need no renewal of water for several weeks. It is a slow way of getting such work done, but it is the only sure way of doing it.—*Practical Farmer.*

FEEDING VALUE OF SOME WEEDS:—

The feeding value of some weeds is very noticeable. Of the weeds used as human food, Professor Storer, of Bussey Institution, gives analysis of the following varieties, viz:—

Per cent. of in	Albumi- noids.	Carbo- hy- drates.	Fat	Ratio of C. H. to Albumi- noids.
Dandelion . .	2.81	8.14	0.69	1 to 3
Nettle . . .	5.50	7.80	0.67	1 to 1½
Plantain . .	2.65	11.66	0.47	1 to 4½
Purslane . .	2.24	2.56	0.40	1 to 1
Pig-weed . .	3.90	9.69	0.76	1 to 2½
(Lamb's quarter)				
Cabbage . .	1.50	6.30	0.40	1 to 4½

An analysis of cabbage is given as a comparison. The high nutritious value of nettle and lamb's quarter is remarkable, and proves that these wild plants are reasonably used for early greens. In fact they are well worth cultivation for this purpose.

This one fact is being brought before the minds of the people of the United States. Kendall's Spavin Cure is not excelled as a liniment. Read advertisement.

Crop Prospects.

In Southern Virginia it was reported the 10th of June, that considerable damage is being done to wheat and oats by small insects known as white midges. Previous to the appearance of these insects wheat and oats gave promise of the largest yield ever known in years.

Snow and ice on the morning of the 23d of May were the meteorological phenomena existing over a very wide extent of country in the temperate zone. The dispatches show that frost and snow were general throughout Iowa, Wisconsin, and northern Illinois. In many places garden vegetables and fruits have suffered severely, but serious injury appears to have been the exception rather than the rule, while wheat, corn and other grains have escaped damage altogether. In Tennessee the wheat yield will be fifty per cent. above the usual average, counting the increased acreage, and much of it has already been harvested in good condition. The outlook for corn, cotton, and crops in general in that state is better than for several years past at this season. There was a slight fall of snow about that time in this section, as far south as Washington.

The oat crop of Georgia, South Carolina, and North Carolina, according to all accounts, is the largest ever made in those States. It is stated that Wilkes, Lincoln and Hancock counties, in Georgia, has produced one million bushels each. The Washington Gazette says the entire small grain crop of Wilkes county has been estimated at one and a quarter million bushels. One planter in that county has a thousand acres in oats and the yield will be fully forty thousand bushels. A planter near Augusta will make twenty thousand bushels of oats and wheat. With this immense crop there will be more than sufficient for home consumption and a large quantity can be sold, bringing a consider-

able amount of money into the State.—Georgia is now raising her own beef and pork. To what a height of prosperity will the South attain when she saves within her own borders the vast sums of money she has heretofore sent abroad for food?

MORE SALES OF MARYLAND FINE STOCK:—At the large sale of blooded trotting and road horses, made on 22d of May, at Meadow View Stock Farm, near Powhatan, Baltimore Co., Md., Mr. H. B. Holton sold 42 head of all ages, and realized for the same \$19,660. His famous stallion, Orange Blossom, was reserved and held at \$20,000. We regret that the highest priced horses sold, went to gentlemen from other States. One sold for \$3,425, others for \$2,000, \$1,000, &c. Twenty-five of the forty-two were bought by Marylanders, among whom were Messrs. Victor Baughman, of Frederick county; Hammond, of Anne Arundel; Adams, of Howard Co., Md., who paid for Hester, gray filly, by Orange Blossom, \$1,400; W. M. Orem, R. Cromwell, Arthur Emory, Morris Thomas and T. M. Tough, of Baltimore city; F. D. Dannenburg, of Catonsville; Thos. Cockey, J. Brian, all of Baltimore county. Mr. Tough paid \$1,025 for a chestnut filly, Spot, and same sum for chestnut filly, Orange Blossom, very promisiug, both these handsome fillies were by Orange Blossom. This is a nucleus for breeding fine trotters in our old State.

THE city of Richmond, Va., has loaned to the State Agricultural Society the sum of \$30,000, which relieves it of its financial embarrassment, and it is going ahead with preparations for the fair. Gen. Wickham has accepted the presidency of the society.

HOW WOMEN LEARN.—Women everywhere use Parker's Ginger Tonic, because they have learned by experience that it overcomes despondency, indigestion, weakness of the back and kidneys, and other troubles of the sex.—*Home Journal*.

LIVE STOCK REGISTER.

The Victoria Swine.

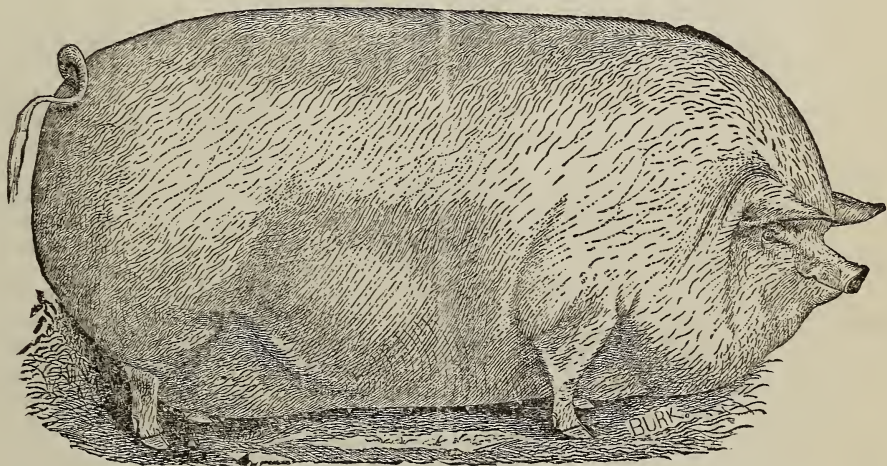
Mr. G. F. Davis, the junior member of the firm of Scheidt & Davis, of Dyer, Indiana, originated this breed of swine from the crossing of four distinct breeds of hogs, viz: Poland China, Chester White, Berkshire and Suffolk. These hogs are of very fine bone and quality and are claimed to be the best hogs by far, for crossing on the large breeds, or natives. They possess

them the favorites of shippers and packers. The quality of their meat is superior and being exceedingly quiet and docile are easily fattened.

These hogs have been prize winners wherever exhibited, and are getting into favor with all who have tried them either as a full breed or for crossing.

They have short legs, broad straight backs, and deep sides."

This stock of Messrs. Scheidt & Davis is reported to have won at the different Fairs in the West, during the last four years, over 130 premiums.



"QUEEN VICTORIA" at 15 Months Old.—Winner of first premium at Chicago Fair, September 12th, 1881, for best Sow under 2 years old. First Premium and Sweepstakes at Lake County Indiana Fair, Oct. 4th, First Premium at Chicago at Stock Show, Nov. 7th, 1881, and was one of the five that took the Special Premium of \$125.00, given by Mr. Field at the above show, for the best five fat hogs, any age or breed,

great power of transmitting their color and fine quality when bred to other breeds. Their average weight at 10 to 12 months old is 300 to 400 pounds, and by heavy feeding have been made to weigh nearly 500 pounds at one year old. Messrs. S. & D. writes us "as breeders they are unsurpassed, raising almost every pig they breed. One of our sows, 'Pretty Duchess,' dropped six litters in two years, and raised 54 out of 53 pigs

Victorias are white in color, and have a good coat of hair; stand very firm on their feet, and have an excellent constitution. They mature at a very early age, and will give more pork for a given amount of feed than any other breed. The large amount of prime meat to weight of carcass, make

THE LARGEST STOCK RAISER in the United States is W. B. Todhunter, of Texas. He branded 9,000 calves last spring, and has already marketed 6,000 beeves this season. He has 20,000 head of stock-cattle, and owns more than 100,000 acres of land. Mr. Todhunter owns 1,000 bulls and 300 saddle-horses; employs fifty men, and puts up 2,500 tons of hay to guard against hard winters. He keeps 100 work-horses, and raises grain enough to feed all his saddle and work stock. Besides his cattle he has 700 or 800 stock-horses, four jacks and fifty stallions.

PERMIT NO SUBSTITUTION.—Insist upon obtaining Floreston Cologne. It is pre-eminently superior in permanence and rich delicacy of fragrance.

Cotswold Sheep.

Kent Island, May 24th, 1882.

Editors Maryland Farmer.—I should like to hand in, for your June issue, a full report of the annual clipping of wool from my flock of Cotswolds, but can safely say I had thirty head, mostly three and four years old, that will yield me 360 pounds. I have sheared several fine specimens, however, this day that gave me the following weights respectively: "Baron Thame," imported yearling ram, and winner of the first prize at the Oxfordshire and three other leading fairs in England as a lamb in August, 1881, 23½ pounds; "Jeannette," a beautiful two year old, with a two month's old lamb by her side, 17 pounds; and a very fine three years old, 16 pounds wool. I have others that will go from 12½ to 15 pounds, but have not time to shear them for your next number. I have had "Baron Thame" sketched, and had hoped to have him in your June number, but the artist could not get the picture ready in time. I hope to present in your July number the likeness of what I consider the heaviest shearer and best covered sheep for his size in America. I have bred my flock to its present high standard by the use of the best rams and dams I could procure, having never used a ram that sheared less than 20 pounds, except late in the season on small ewes, that did not prove in lamb.

I have forty lambs of both sexes, that a good many of these weighed at birth, 12 to 15 pounds, when they came singly. I have them to-day at 60 days old to weigh 60 pounds. I have no hesitation in recommending my flock as second to none (for its size), and only ask an inspection before purchasing elsewhere. I have already sold several lambs from \$20 to \$40 each, and I would be glad to receive early orders, that they may be specially fitted up for their purchasers. I have fine grazing, and they now begin to repair the loss sustained by the continued drought of the last two years. I sold during the season of 1882, the following sheep: Thos. B. Eareckson, Kent Island, one grade ram \$10; S. G. Boyd, York county, Pa., two ewes for \$50; G. S. Owens, Savannah, Ga., one ram and six ewes for \$140; J. B. Brown, Centreville, one ewe at \$17; Wm. F. Ford, Queen Anne's county, one ram

for \$20; J. B. Gray, Fredericksburg, Va., five ewes for \$78; Samuel Ringgold, of this place, one ram for \$45; Col. W. L. Washington, of W. Va., one ram, "Royal Sherborne," (by the way the largest bones and the finest shearer at two years old I ever knew,) which is the sire of my present crop of lambs, whose fleece last year would have been at least 24 pounds if he had have been kept till regular shearing time; I sold him for \$125. I can't supply the demand for good stock, but now have more than I ever had before, and promise to give satisfaction.

June 10th, 1882.

I have 24 ewes eligible to registry, many of which are directly from imported sires and dams, and others that trace for 2 and 3 generations to imported parents. I claim my flock second to none in *good breeding* and individual excellence, and have never used on my thoroughbred ewes any thing but imported rams; that had cost me from \$125 to \$200 each. I have another class of sheep of my own breeding that I consider equally as good as the registered one. I started on good Cotswold ewes years ago, bred their crosses successively and consecutively to imported sires, and now have of this class, ewes that sheared me as yearlings from 17 to 20½ pounds wool, which now have lambs of both sexes, sired by imported rams. These will sell for less than registered ewes, and will say, if well kept, that they will clip 12 to 20 pounds wool. I have about 40 lambs to sell and at prices to suit the times. Some of your subscribers being under the opinion that my prices are high, I have deemed it necessary to make the above distinction between the two classes of sheep, and will say, I can give as good specimens and as pure stock as any one in Maryland or any where else.

E. C. LEGG.

History of the Red Hog.

So far as we have any record of this hog we find him first brought to the public notice in England. By some it is claimed they were taken there from Spain. The name by which they were distinguished from other breeds was that of Red Berkshire. Professor David Low in his work, "The Breeds of the Domestic Animals of the British Isles," published in 1842, describes their color as reddish brown with

brown or black spots. About the year 1850, Sir Robert Peel brought them before the public, and by some they were called the Sir Robert Peel Hog, or Tamworth Hog.

No one appears to know when this red hog was first imported to America; however, it is claimed that they were bred in New York State as early as 1823, and there called Duroc, in honor of the justly celebrated Duroc horse. This name is not appropriate—it belongs to the equine race.

They have also been bred in New Jersey for many years, and are called there Jersey Red—hence the origin of that name. For many years past they have run wild in the timber and mountainous country in Tennessee and Kentucky, as some of the soldiers of the "late unpleasantness" can testify. These various families, doubtless are of the same origin, but under the moulding hand of man are found to-day to present very different conformations.

The Red Berkshire of to-day has a small head, thick snout, rather small drooping ears, short neck, straight back and underline, a thick, full ham, body round, deep, with full flanks, short legged and medium bone. Color red to dark red. They are quick growth, get large enough for all purposes, often averaging by the car load 300 pounds gross from ten to 12 months old. They are docile and very prolific, good mothers, careful with their young. They are a nice, compact hog, and popular with packers, and will outweigh any hog of their size in the world. The family called by the misnomer "Duroc" are identical with the Red Berkshire.

The Jersey Red, as those in the State of New Jersey are called, are much larger than the Red Berkshire and also much coarser in structure, are rapid growers, frequently dressing 600 pounds at eighteen or twenty months old. They have long bodies, short legs, large bone, with rather large, drooping ears, face wide, neck short, large through the heart, large hams, color dark to sandy red, and noted as a bacon hog. The are also very docile, prolific, attentive mothers and great grazers. In fact, this is also a characteristic of the Red Berkshires—there is no better grazing hog in existence. The great advantages of these swine are;—1st. Their susceptibility of being fattened at any age. 2nd. Their capacity for growing very large if desirable,

3rd. They will produce as much pork for the same amount of feed as any other breed if not more, and though not quite as handsome as some others, yet they are the hardiest breed known, the most prolific and best hog in existence at the present time for the farmer, swine breeder and stock grower.—*Toronto Canada Globe.*

Self-Cleaning Pig-pen.

The writer has also placed pigs upon a slatted floor, which would allow the liquid and much of the solid to go through, and the balance was mostly trodden through. On one side of the pen was a strip of tight floor, four feet wide, with the trough placed upon it against the side of the pen, and upon these planks was placed bedding for the pigs. They soon learned the use of the slatted part of the pen, and would go there and drop. The slatted floor is elevated fifteen inches above the bottom, so that the excretion works through the slats and the pen and pigs are kept clean. A door is hung on a hinge so as to be turned up and allow the manure to be cleaned from under the slatted part of the floor. The pigs, in this case, keep quite clean, without any labor being bestowed upon them, except to remove the manure once a month, from under the slatted floor.—*National Live Stock Journal.*

BALTIMORE COUNTY AHEAD!—The first peas put on the Baltimore market, that were grown this year, came from the Revier farm, Mr. Lee, manager, on 3rd of June. This farm is owned by Mr. Stebbins, of this city, and situated on the high ridge just above the Viaduct Hotel of the B. & O. R. R., in Baltimore county. Its southern hill-sides give it a great advantage in growing early vegetables.

Zionsville, Indiana, Nov. 3, 1880.

DR. B. J. KENDALL & Co.—Gents;—I have your valuable "Treatise on the horse and his Diseases," and your Kendall's Spavin Cure. My horses had the epizootic, one of them could not swallow for two days. I applied the Spavin Cure twice to her throat, and it gave almost instant relief. I think I could sell 1,000 of your books. Please give prices to agents.

Yours truly,

PETER BOWEN.

MARYLAND FARMER

A STANDARD MAGAZINE,

DEVOTED TO

Agriculture, Live Stock and Rural Economy.

EZRA WHITMAN, Editor,

COL. W. W. W. BOWIE Associate Editor,

141 WEST PRATT STREET,

BALTIMORE, MD.

BALTIMORE, JULY 1st, 1882.

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or Report of Ensilage Congress,

Either book is worth to the farmer more than the price of our Journal, and by enclosing \$1.00 the Maryland Farmer will be promptly sent you for one year and either of the books you may select, free of postage.

EZRA WHITMAN.

☞ COL. D. S. CURTIS, of Washington, D. C., is authorized to act as Correspondent and Agent to receive subscriptions and advertisements for the MARYLAND FARMER, in the District of Columbia Maryland and Virginia.

☞ Our friends can do us a good turn by mentioning the MARYLAND FARMER to their neighbors, and suggesting to them to subscribe for it.

Our Visit to Rock Hall, Kent Co., Maryland.

Accepting the kind invitation of Dr. A. P. Sharp, of this city, to visit him at his Rock Hall farm, I took the steamer *Nellie White*, for Tolchester, on the 14th of June, and on board met Messrs. S. Francis & Bingham, of the firm of Francis & Co., Baltimore, who were also on their way to Rock Hall. At Tolchester we met the doctor's carriage and were driven seven miles to his mansion. On our arrival I met the familiar faces of many of my old friends, and among them were W. W. Stevens, Isaac Parsons, Saml. Vannort, J. W. Corey, Robert Nicholson, W. Eliason and Wm. Morris. Aware of their success as farmers, I was glad, for it assured me that I should spend a day of pleasure and receive much practical information.

Soon after we arrived the Doctor invited the company to visit his wheat field, to inspect it and examine it with a view of proving his theory—so long and zealously contended for by him, viz ; That there was no reason why farmers should buy nitrogen, when the soil had it stored up and the air was full of it. The field contains 20 acres and looked very well, looking all over alike and showing a prospect of an average of twenty-five bushels per acre. He stated it had been heavily cropped the past ten years, without the application of any ammoniated fertilizer, which fact he thought should convince anyone that good crops could be made without the expense of ammoniated phosphates. He stated that on that field he had used different kinds of fertilizers, each sort marked by stakes or otherwise, which marks were familiar to himself and his manager alone. On one breadth he had used nothing, and on one, ammoniated phosphate at the rate of \$20 per acre. As we went around and sometimes into the field he desired us to tell, if we could, where the piece was on which the ammonia was placed—none could tell.

After this, we started back to have him show where the different experiments had been made, and then some of the company thought there was a shade of difference in that grown under the nitrogenous influences.

We next visited his thirty acre grass field, which certainly was the best grass I have seen this season, and I have rarely seen a better one at any time or at any place. It was timothy and clover, nearly ready for the scythe. It was estimated to yield an average of two tons per acre. This lot had wheat on it last year, but has had no nitrogen or ammoniated fertilizer upon it for fifteen years.

We were then shown his stables, wind-mill working a pump, his new artesian well, 175 feet deep, constructed upon a new economical plan, giving a constant and full stream of pure water, passing through his dairy and then to be further utilized at will. The bell for dinner then sounded and we repaired to the house, on the broad portico we had the pleasure of being introduced to Mrs. Sharp, by whom we were invited into the dining-room, where an abundant and excellent repast was spread, to which full justice was done, our appetites having been whetted by our exercise of the day. The Doctor's good wife at one end of the table, and the Doctor, at the other, (however enthusiastic he was about his pet theory,) saw that all were made happy by their assiduous attentions.

After dining we were shown over the house, which is three stories high and finished in all its parts in yellow pine, with furniture made to match. The office, large dining-room and parlors, as well as chambers, each and all, seemed well constituted for comfort and convenience with simple elegance. Our host could have but been much gratified at the many encomiums bestowed on the appearance of his farm and crops, the beauty of the location and house, and the vast improvement of his farm in so few years, at so little cost of manures.

Regretfully the company separated in time for us to reach the boat at Tolchester on her return trip to this city, where we arrived at 8 o'clock, after having spent a most enjoyable day at Rock Hall. W.

The Maryland Farmer Festival.

On the 7th of June, the publisher and senior editor of this Journal completed his seventieth year and signallized it by inviting his friends generally, and especially all the patrons of the MARYLAND FARMER to a collation on that day. The large office rooms were filled during two or three hours between 11 o'clock, A. M. and 2 o'clock, P. M.

Among the large number of visitors were Dr. George B. Loring, of Massachusetts, United States Commissioner of Agriculture; Hon. George Colton, General James R. Herbert, Judge Wm. M. Merrick, Mr. John T. Ford, Professor Nathan Brooks, Mr. Wm. S. Powell, Mr. J. Alexander Shriver, Hon. Henry D. Farnandis, the newly elected president of the Chesapeake and Ohio Canal; Col. John Carroll Walsh, of Harford county; H. T. Wooster, James D. Mason, Col. Hogan, of the Maltby House; Mr. John Feast, Sr., E. A. Talbott, of Ellicott City, John Carson, Esq., J. T. Mason, Professor Maurice, Dr. Mullikin, W. Hardesty, J. Q. Early and Wm. Stanley, Esq., of Prince Georges county; Wm. H. Oler, E. B. Emory, Centreville; E. C. Legg, Kent Island; Dr. A. P. Sharp, Wm. Rigney, Fielder C. Slingluff, Andrew Trippe, H. Taylor, Baltimore News Co., Mr. W. Calvert, Mr. F. Fauth, E. D. Hallock, W. Hutching, E. B. Whitman, Pres. Balto. Plow Co., N. B. & W. D. Merryman, and others.

The room presented a very pleasing appearance, with the library on one side, pictures and flowers on all sides, and a long table loaded with the delicacies of the season and ornamented by a splendid boquet in the centre, flanked by beautiful roses and other cut flowers. The cultivated and wild grasses were grouped in one window, and another held a noble sheaf of rye, brought by Mr. Faught, of Baltimore county, measuring 8 feet high. Conspicuous, was a shield of dark moss rimmed with lovely syringa, orange blossoms and laurel, with

1812-1882 in large, raised figures, composed of tiny white flowers on the dark, mossy field, attractively called to mind the object of the assemblage. These floral tributes, so creditable to his taste, were the offerings of that eminent and distinguished florist, Mr. Robt. J. Halliday, Pennsylvania avenue, Baltimore. The small dishes of cut roses were sent by lady correspondents.

The menu was furnished from the Maltby House, under the charge of its chief waiter, J. Anderson, who acquitted himself admirably. It had the personal supervision of Col. Hogan, which is a guaranty of having been a success.

The little ceremonies on the occasion opened with a pleasant incident that completely surprised Mr. Whitman. A very handsome reclining arm chair, upholstered in velvet and raw silk, was presented to Mr. Whitman by the employees. Col. Bowie, accompanied by the whole troupe, some 20 or 30, made the presentation speech, and closed by reading the following letter.

Baltimore, June 7th, 1882.

E. WHITMAN, ESQ.,

Dear Sir:—The undersigned employees of E. Whitman, Sons & Co., together with those employed in the editorial and printing office of the MARYLAND FARMER, do sincerely congratulate you upon the possession of those manly virtues—calmness of temper, dignity, gentleness, kind feelings, urbanity and integrity—so necessary to induce father Time to deal leniently. Few men have numbered three score and ten years who can show so few marks to tell each year that has past, and be in full enjoyment of the blessings of health, mental vigor and the comforts of life.

In recognition of this gratifying occasion and as a slight token of our personal regard and high esteem, we beg you to accept the ARM CHAIR herewith presented, with the heartfelt hope that you may be spared many years to enjoy the blessings of ease, peace and comfort within its luxurious arms. Most respectfully,

YOUR FRIENDS.

Mr. Whitman, though taken by surprise, returned his thanks in feeling terms, and in a few words touchingly alluded to the fraternal relations that should exist between employer and employees.

After the repast was nearly over Col,

Bowie of the Maryland Farmer called order, and said as the honor of presiding over this social gathering, had been thrust upon him, he would not shrink from its responsibilities but do his duty as best he could. He made a few, humorous remarks, referred to the long and useful life of the host, and concluded by proposing the health, and long continued life and prosperity of Ezra Whitman, the *Father of the Maryland Farmer*. This toast was received with rapturous applause.

Mr. Whitman quietly and modestly responded in the following words;

MY FRIENDS:

"When it was known at the office that to-day—the 7th of June—I would complete my three score and ten years, it was decided to recognize it in some especial manner, and accordingly in the June number of the MARYLAND FARMER a cordial invitation was extended to all patrons of the Journal to meet here and mingle in social intercourse.

"I may be pardoned on an occasion like this for recalling some of the incidents connected with my past life.

"My life has been a study to improve and further agricultural pursuits by the introduction of labor-saving machinery. The strides that have been made in that line in this country within the last half century, has been most wonderful and almost past belief. For instance, let us recall the old sickle that reaped the grain 50 years ago, and behold the perfect reaper and binder of to-day. Remember the old-time threshing floor, with flails, or tramping around in a circle the horses or muzzled oxen, and then behold the almost human machine, driven by horse or steam power, threshing and fanning the grain at one operation, cleaning for the granary 1,000 bushels per day, when a long day's hard work of equal number of laborers would not have put in like order fifty bushels, some forty years ago.

"I mention with some pride, that the first reaping machine ever put to work in the field was invented and built by my father in 1824, who continued his experiments for 8 years, myself working with him until 1832, when we had perfected and

put in the field a complete and full sized working machine. This machine was crude, but demonstrated the principle and established the fact that grain could be harvested better and more easily by machinery than by human hands.

"Thus stimulated, the ingenuity of mechanics soon improved upon our endless chain and revolving knives, by introducing the simple crank motion and made the reaper a perfect success, which has gone on under the light of science and skill, until it has reached almost perfection, reaping, binding, threshing and bagging at one operation! This achievement, though wonderful, is nearly equalled by the improvement in plows, in the same period of time. What a mighty change between the cast-iron and steel plow, easy of draught and cheap in price, admirable in working—and our ancestors' wooden mouldboard, covered with wrought iron, heavy, unwieldy and exhaustive of both horses and plowmen.

"In 1843, I left New England and settled in Baltimore. The first 20 years of my Baltimore life was entirely devoted to the manufacture and introduction of farm machinery and implements and the sale of fertilizers, seeds, &c. Finding in 1863 that there was not an agricultural paper in the State, I established the Maryland Farmer, which appeared in January, 1864, and held for about ten years the field of agricultural journalism alone.

"From that day to this, I have labored sedulously to promote the great cause of agriculture, and with both pride and pleasure refer to the steady improvement of the Maryland Farmer and its intrinsic value at the present moment.

"In the commencement of the farmer I was ably assisted for years by the late Col. Mills whose death has been universally lamented. Since then I have availed myself of the varied attainments and practical experience of Col. Bowie, so popularly familiar to the agricultural world as "*Patuxent Planter*." With such associates and a large corps of efficient correspondents, I have been enabled to meet the increasing popularity of the Journal, and to maintain its high standard. The best evidence of its appreciation is manifested by the numerous kindly expressed regrets from friends all over the country at their inability to attend to day, and by the presence of so many,

for all of which my heart beats with grateful emotions."

The Chairman, in some complimentary remarks, called upon Dr. Loring, the U. S. Commissioner of Agriculture, and expressed the hope that the Commissioner, on his next visit to Maryland, would be a member of the cabinet as Secretary of the Department of Agriculture. Dr. Loring then eloquently responded in nearly these words:

Gentlemen :—When I was invited to be present on this occasion, I was wholly unaware of the character of the gathering, except that it was called to pay a just meed of respect to an old and tried friend of agriculture, one of its ablest supporters and advocates who had reached the close of his seventieth year, the three score and ten, the time allotted to man here on earth, and with whose name I have long been familiar. I remember well the family in Massachusetts from which he sprang, a race of honest, brave, honorable, Christian men, who toiled faithfully in many walks in life and who were heard often among the devoted advocates of the Puritan theology of New England, a temperate, long-lived race, one of whose progenitors passed away at the early age of 107. When Ezra Whitman, whose life and services we have met here to commemorate and whom we congratulate on his long and honorable career, came here from his native State forty years ago, he brought with him all these family characteristics and engrafted them upon the social qualities of Maryland, creating a union most useful and admirable. The friendship which has grown up between this son of New England and the fine representative of Maryland, Col. Bowie, indicates the bond which bind us together in this country, making us one through all trials, and illustrating the real unity which belongs to strong powers when gathered into one nationality. This union between us is natural, and in this case it is confirmed and strengthened by a common love of the American soil and American agriculture; may this bond long bind us together. The service which Mr. Whitman has performed in this honorable calling is great. Entering early into the introduction of the best labor-saving machinery, he has lived to see the broad agriculture of the republic made

possible by the application of the best mechanical forces; and having done his part towards this accomplishment, he has devoted himself to the cultivation of the agricultural mind of the country in order that the best methods of farming might be thoroughly understood.

It is to such labor as this that we owe the high position which the farmer occupies in this country to-day. It is not reaping the spontaneous productions of the earth on the broad lands lying beyond the pale of civilization that constitutes the farmer's most important work here, valuable as the pioneer is in the work of developing our national growth and power. It is the devotion of labor to the careful cultivation of the earth near the centres of population that affords the farmer who possesses the machinery which Mr. Whitman has introduced, and the education which he has constantly poured forth, an opportunity to live as an active, intelligent American most desires. The occupation of small farms, with the systematic management which of necessity goes with them, constitutes the most profitable work of the American farmer, and in order to acquit himself well he must be guided by this law. The service performed by agriculture in sustaining the financial prosperity of the country is great, but the service performed by agriculture in supporting a thriving and industrious population engaged in cultivating special crops in the very centres of civilization is greater. To this latter work all our growing and thickly settled States are advancing, and as they advance the example and teachings of Mr. Whitman will grow more and more valuable. For his services in this direction he is entitled to our warmest gratitude.

The allusion of Col. Bowie to the elevation of the Department of Agriculture to a sphere of wider influence and importance than it now possesses, calls for a passing remark. It is time that department was placed in such a position that it would not be praised on one hand and ridiculed on the other. The industry of agriculture is entitled to the highest consideration of the government; and if it were possible to secure such support as it deserves without official prominence it would be entirely satisfactory to all its advocates and devotees. If, however, for its proper recognition, official station is necessary let us accept that.

But however this may be, I feel bound to discharge the duty imposed upon me by him who called me to this service, and who appealed to me to make the department what it should be. If this cannot be done I had better retire from it. That Congress has a desire to increase its usefulness, the increase of the appropriation for statistical work, from \$10,000 to \$80,000 per year, at the present session, is a substantial evidence. Give the department sufficient endowment and its usefulness will never again be called into question.

I feel under great obligations to our venerable host for giving us this opportunity to meet himself and his friends, and to you, gentlemen, for your courteous attention. And long may Mr. Whitman remain among you to perform his useful work and set his good example."

The Chairman then in a few friendly, jocose, but highly eulogistic words, called upon the Hon. George Colton to respond. Mr. Colton protested that he was wholly unprepared and deprecated the advantage that the chair had taken of him, yet he warmed up and made an eloquent and appropriate address, sprinkled over with wit and humor. Among other things he said:

"He hoped that Mr. Whitman would live as long as Moses, and remarked that it would be only a half a century longer. Twenty-five years ago he purchased a farm in Howard county, and although he knew that the man who made two blades of grass grow where one grew before was a public benefactor, yet with all his endeavors he could not grow any. An acquaintance with Mr. Whitman, however, had shown him how to grow several, and he hoped that gentleman would live long, so that he (the speaker,) might be shown many other things agricultural."

Mr. Colton closed happily with the observation that,

"Mr. Whitman was, aside from being an honorable representative of the agricultural interests, a member of the press—that mighty power which all recognized as secondary to none, except that of Christianity, and whose strongest support it was."

The Chairman then called for a few words from Gen. Herbert, the gallant sol-

dier in war, and in peace, the loyal citizen, and guardian of the lives and property of our people, (alluding to the General being a police commissioner.) Gen. Herbert responded in a terse, impressive and eloquent manner. After warmly congratulating Mr. Whitman, he alluded to the remarks of the chair, and said he had as a soldier, done his duty.

"As a citizen he had tried to do his duty and, said he, you will find that in ninety-nine cases out of a hundred, that the man who was a good soldier is also a good citizen. My old general, General Lee, I am proud to say, was the first to give us this advice."

By this time the usual busiest business hour of the day was approaching, and the merchants and professional men began a quiet retreat, and thus robbed the chairman of the great pleasure he had anticipated in calling upon a score of other capital impromptu speakers he had in his eye when he took the chair.

Among the many absent friends who could not be present, Mr. Whitman received kindly worded letters from Hon. N. T. Sprague, Vt.; Messrs. J. Gould, Ohio; Jas. B. Fillebrown, Maine; Luther Bowers, Va.; A. M. Fulford, Md.; A. B. Farquhar, Pa.; Russell N. Wheler, N. Y.; E. P. Duval, State Librarian of Md.; Col. J. W. Ware, Va.; Zimmerman & Co., Ohio; John Ryan, Balto.; Col. D. S. Curtis, Washington, D. C.; W. G. Smith & Co., Ohio; T. S. Gold, Conn.; Willis P. Hazard, Pa.; Mr. and Mrs. W. H. Chase, Mass.; D. Z. Evans, Jr., Pa.; D. W. Beadle, Canada; R. Q. Taylor, Baltimore; Child Bros. & Co., Pa.; D. C. Hoffercker, Del.; W. B. Jones, Ga.; W. Judson Brown, Baltimore; Ed. L. Crosby, Indiana; W. L. Washington, W. Va.; J. C. Howard, Maine, Jas. R. Brewer, of Baltimore, Md., Mr. M. L. Abbott, Maine, and Sir John B. Lawes, L. L. D., England, and others.

We cannot refrain from giving extracts from two of the letters received, as specimens of the great respect and friendship

which pervaded all these letters of regretted absence on the festive occasion. It will be seen that one of the following letters is from a friend of his youth, in the North, the other is from one, who as a public man and able journalist has closely watched the career of Mr. W. since his long residence in the South, and become identified with her institutions.

WINTHROP, Maine, June 5, 1882.

Capt. Whitman:—

"* * * * * Much joy do I wish you, and may prosperity's sun resplendent in all its glory, beam on you bright through the intervening years of your sojourn here on earth.

These lines we will pen, which occur to the mind,
To you, our old friend, for the good of mankind
Which your labors have wrought through the space
of those years,
So full and complete now the harvest appears.

Yours, very truly,

J. C. HOWARD.

BALTO., June 6, 1882.

Ezra Whitman:—

"* * * * * I have known you so long and favorably, have respected you so highly and regarded you as so useful and public spirited a citizen, as well as esteemed you so much as an ornament to our profession, that I feel I would be sadly remiss if I did not, at this anniversary, wish you many happy and prosperous years in addition to your three score and ten.

"Certainly, there is no citizen of Baltimore, who has contributed more freely of his means and energies to make our city progressive and prosperous than you. In business you have always maintained a reputation for integrity, enterprise and liberality; in politics, no test, however threatening or severe, has ever swerved you from the expression and pursuit of your convictions. You have been just, humane and charitable in all your dealings with your fellow men, and in the domestic relations of life you have been above reproach. This is the record of which you may well be proud, as you stand in the glowing and glorious afternoon of life. It is a record worth the toil and sacrifices of so long a period, to obtain and enjoy. May life's sun move slowly towards your western horizon, and may you yet have many vigorous, happy, honored years before the

blessed twilight comes, is the sincere wish of

Yours, very truly,

JAMES R. BREWER.

The press—both political and agricultural, in a number of the States, north, east, south, and especially in Maryland, noticed the event, and fraternally extended their heartiest congratulations in the most flattering terms. We know that such evidences of regard were highly gratifying to Mr. Whitman, and will be ever cherished by him.

The occasion was a happy re-union of friends and will long be remembered with pleasure, we feel confident, by all those who participated.

NINTH ANNUAL TRI-STATE PIC-NIC AND EXHIBITION OF THE PATRONS OF HUSBANDRY, of Pennsylvania, Maryland and West Virginia, to be held at William's Grove, Cumberland county, Pa., on Monday, August 21st, and closing August 26th. As these pic-nics are in the interest of the farmers, they have annually become more popular and important in the crowds attending, as well as in the variety and number of exhibits. This year there is expected an immense crowd daily. We purpose to be there on the editorial day, if not all the time. The trip, of itself, is worth the low price of an excursion trip ticket, (sold uncommonly low on these occasions by the railroads,) because of the scenery, beautiful country seats, fine farms and the splendid fair exhibits that one enjoys when on a visit to this famous William's Grove.

WEALTH. Wealth is pretty well brought down in these days to a question of health. If you are not in thorough good health you are not fit for the daily battle of life. A man in poor health, can barely hold his own nowadays, and as to increasing his income, that is out of the question. Therefore brain tonics, heart tonics, liver tonics, attractive tonics and electric tonics are concocted by the hundred, and certain cures and safe cures by the thousand as if there was safety in numbers. And all the while there is but one cure. Nature's own remedy. A simple natural combination of indigenous Herbs, such as are contained in Dr, Clark Johnson's Indian Blood Syrup.

THE APIARY.

For the Maryland Farmer.

Italian Bees and how to Italianize the Common Black Bees.

After having tested the Italian bees for ten years we can say very truly that they are far superior to the black or native bees. First. They are more energetic and resist the attack of robbers and the bee-moth; never had a strong colony of Italians robbed or destroyed by the bee moth. Second. They are better honey gatherers and can gather honey from flowers that the black bees can not. Our Italians, during a dry spell, the fall of 1881, were busy working on red clover while there could not be a black bee seen. Third. They will gather at least one-third more honey than the black bees, to take one year with another. Fourth, and last; they are more quiet and better to handle, the bees stick close to the combs.

A pure Italian should have three distinct, yellow bands or rings across the lower part of the abdomen, and a bright yellow hair over the body. The so-called Albino bees are a strain of Italians, having white bands and hair, they are the finest workers of the two and very nice to handle, they are of American origin, and are distinguished in scientific bee culture, as (*Apis America*.) We got our first queen of this strains of Italians, October, 1879, the next year, 1890, this colony gave us two swarms and 110 lbs. of one lb. sections of honey, and last year, the same queen's colony gave us 63 lbs. of one lb. sections of honey. The honey of 1880, brought us \$16.50, while that of 1881, brought us \$12.60.

Our average last year was 42 lbs. per colony, (Italians,) when the average per colony black bees, last year, fell below par.

How to Italianize.

First. Procure a good queen from a reliable breeder, and when the queen arrives, if in movable frame hive, commence on one side of hive and take out one or two frames, and shake off the bees so as to be sure that the black queen is not on them. Now have a new hive; put the two frames in and set in place of the old hive, and carry the old hive and remaining bees some six or eight rods away, then examine each frame carefully until the black queen

is found, then kill her or make a new colony by giving her about half of the frames, and set it some distance from where it first stood. Queens are mostly sent in a cage one inch thick and two inches square, take this cage and lay it on a frame of brood, near the top bar, and with a sharp knife cut out a piece of comb, just as large as the cage and no larger. Now remove the two tacks that hold the tin gate, but do not let the gate slip out of place, slip the cage in the hole cut in the comb with the gate down, *be sure the gate is in the right place so it will be impossible for the queen to get out*, place the frames in the hives just as they were, and leave it for 36 to 48 hours, then remove the tin gate, but leave the cage in position, and with a sharp, thin knife give two or three cuts just below the opening, but do not remove any comb, now close the hive and the bees will know their way out, but before closing the hive be careful to destroy all queen cells. In about five days open the hive and see if all is right and remove the cage. The above plan is intended for those who have had but little experience at the business and not for the practical apiarian. The above article has been written at the request of several readers of the MARYLAND FARMER

J. LUTHER BOWERS.

Berryville, Va.

THE Board of Directors of the National Fair Association, Washington, D. C., have decided not to hold an agricultural fair in the fall. A trotting meeting will be held September. The trotting committee were directed to give, June 26, a trotting matinee, with one trotting and one pacing race.

THAT excellent and prosperous journal, the old *Port Tobacco Times*, we see, has entered on its 39th volume with renewed vigor. Long may it wave.

THE DANGERS OF THE STOCK MARKET.—A man may be incredulous enough to risk his money in the fickle mysteries of a mercantile stock market but when he gets the itching piles, he goes straight for Dr. Swayne's Ointment. Unlike the Bulls and Bears of the stock Exchange, who clean you out of hard earned cash, it returns your money with interest, in the way of allaying the intense itching and insuring sweet repose. Read advertisement.

VISITERS.—We had the pleasure of an interview with Professor Law, of Cornell University, N. Y., and Dr. Rose, United States Cattle Inspector for this State, and others, at our office, on the 22nd ult. Professor Law is evidently a zealous worker in all that is likely to advance the interests of agriculturists, inclusive of stock-breeding, horticulture, improvement of soils, and all matters calculated to elevate and dignify the calling of the farmer. We were more pleased with this visit because we had the opportunity to exhibit to them what we had already in type, in regard to the pleuropneumonia or cattle plague in Maryland and have their full sanction and approval of the same.

Pleuro-Pneumonia.

It has been lately asserted in the public papers, that Governor Hamilton desired it to be known that there has not been a case of this fatal cattle plague known within the State for the past six months. We regret that such a statement should have been made by such high authority. It was calculated to disarm all apprehension on the part of our enterprising breeders who are investing such large sums of money in the best breeds of cattle, to improve the character of Maryland stock, which already has attained national reputation. It was calculated to endanger the fortunes of many breeders of cattle, and lead to failure or total loss. A day or two after this statement appeared, Dr. W. H. Rose, U. S. Cattle Inspector, called at our office and informed us that he knew of some dozen or more cases in sections of the State, and we agreed with him that the public should be guarded against the injury that this unfortunate report of absence of all such disease might create. We have had no opportunity before this to lay before our readers what Dr. Rose told us. His statements have just been confirmed by the published report of the United States Cat-

tle Commission, consisting of Prof. James Law, of Cornell University, N. Y.; Dr. E. F. Thayer, of Boston, and J. H. Sanders, of Chicago. On the 19th of June they found several clearly marked and undoubted cases of this terrible disease in Baltimore county, and have officially called the attention of the Governor of Maryland to these facts. We trust the Governor will take the necessary steps promptly to ferret out all cases, and stamp out, if possible, at once, this fatal, European, contagious lung plague.

As public sentinels we feel it our duty to sound the alarm when there is imminent danger of so fatal a malady spreading.

THE ST. LOUIS FAIR ASSOCIATION.—Have appropriated \$50,000 for premiums for their twenty-second annual fair, to begin Monday, October 2, and last six days. Ten thousand dollars has been appropriated for the improvement of the grounds, and an additional appropriation is about to be made to remodel and paint the exhibition halls; \$2,000 has been spent for a new commodious music stand. Donations to the zoological gardens are being constantly received by Secretary Kalb, of various animals and birds from the rural districts, which are highly appreciated by the officers of the association.

COMMISSIONER LORING has issued a circular letter to the manufacturers of sorghum sugar, in which he makes a liberal offer of \$1,200, each, for ten of the best returns from them during the coming season. This offer is well calculated to stimulate the industry to the utmost in every section of the country where this much talked of and experimented upon plant is grown, and the results will be awaited with interest.

FADED COLORS RESTORED.—Faded or gray hair gradually recovers its youthful color and lustre by the use of Parker's Hair Balsam, an elegant dressing, admired for its purity and rich perfume.



The Property of E. C. Legg, Esq., Kent Island, Md.

Imported "BARON THAME" was bred by Henry Aker's Farringdon, England, was winner as a lamb, in August, 1881, of first prize at the Oxfordshire and three other leading fairs in England, sheared when 14 months old, 23½ lbs. wool and had he been housed, and not exposed to the drenching rains which we had through the spring, his fleece had easily given 25 lbs. I consider him the best sheep for wool in the United States, as far as my knowledge goes, and his superior merits will doubtlessly be seen for generations to come, as his compact form and unusual covering can not fail to impress his progeny. L.

PURCHASE OF A NOTED JERSEY COW.—Messrs. Watts & Seth, of Baltimore, have bought from Thomas Taggart, of Washington county, Md., the Jersey cow, "Value Second," one of the most noted cows of her breed, she having made 24 pounds of butter in one week with her second calf, and 67½ pounds in one year.

LONGFELLOW MEMORIAL ASSOCIATION.—Money for the national dollar subscription in honor of Mr. Longfellow, should be sent to John Bartlett, treasurer, P. O. Box 1590, Boston, Mass. A dollar cannot well be spent in a better cause than in aid of a monument dedicated to so popular and so grand an American poet.

CONGRATULATION:—We are happy to offer our congratulations to our young brother who reflects so much credit upon the Marlboro Gazette—one of the oldest newspapers, and the oldest rural paper in the State. Venerable in age and venerated for its intrinsic worth, we sincerely wish it may continue to grow in prosperity as it grows in years.

Take Notice.—As this number of the Maryland Farmer begins the last half of the year, it is a favorable time for persons to subscribe. We hope, therefore to have shortly a long list of names to be added to our subscription lists.

LADIES' DEPARTMENT.

Chats with the Ladies for July.

BY PATUXENT PLANTER.

A Country Home.

"O give me a home in the country wide,
And a seat by the farmer's wood fireside,
Where the fire burns bright
On a frosty night;
Where the jest, the song and the laugh are free,
O the farmer's home is the home for me.

"O give me a home in the country wide,
When the earth comes out as a blushing bride;
With the buds and flowers,
In the bright hours,
Her bridal song ringing from fresh leaved trees,
And melody floats on the perfumed breeze.

"In summer a seat in a shady nook,
And close by the side of a purling brook
Where the violet grows,
Or the pale swamp rose,
Fainting, sick, 'neath the sun's scorching beam,
Dips her petals in the cooling stream.

"O give me a home in the country wide.
In the golden day of a farmer's pride,
When his barns are filled
From the fields he tilled,
And he feels that his yearly task is done,
And smiling at winter he beckons him on."

A home in the country can always be a happy home if the dwellers of country homes so choose to make it. As a rule they are happier dwelling places than those found in crowded marts or fashionable watering places, sea-side cottages, mountain hotels or even in aesthetic cities.

But why are they so? Because temptation for dissipation is far less—the glories of nature are profusely poured out, the air and water are purer and more refreshing, the soul is irresistibly lifted from beautiful surroundings up to the God of nature, and the quietude and occasional hush of nature's self is favorable to improvement of mind and self-criticism, which always tends to a holier, more contented and happier state of mind. But is this all. No. One thing is necessary for perfect enjoyment of rural life, and that is employment. The mind or the body must be constantly employed or everything will clog, the devil's workshop, an unemployed mind will be started at once.

I have often talked to you about amusements and exercises, but seldom of profitable industries. I wish to say this month a word as to a work that will suit women, children, the aged and infirm. Light work, yet very remunerative. I mean the raising silk worms, cultivation of the mulberry and silk manufacturing. I can do no better than append the following extracts from a card sent out by the Women's Silk Culture Association of Philadelphia.

THE NEW SILK INDUSTRY.

"The greatest incentive to engage in silk culture is the knowledge that there is a home market for \$15,400,000 worth of floss, which American manufacturers are obliged to import from foreign lands. The other consideration is, that silk culture furnishes women and children in the rural districts with a congenial occupation that does not require constant attention, and so will not interfere with household duties.

In view of these facts the Women's Silk Culture Association of Philadelphia was organized two years ago for the purpose of calling the attention of the women of the country to the opportunity given them to establish a new industry, both suitable and profitable; and also to give the necessary instructions to all desiring to engage in silk culture.

The success of this pioneer association is remarkable; there has been aroused a wide-spread interest in the cultivation of cocoons, that must go on increasing until the aim of the association is fulfilled.

"This fact was most forcibly presented at the last exhibition of the association, at which the display of cocoons was very fine and interesting. The chief feature of the exhibition was the display of specimen cocoons by the twenty-six contestants for the Strawbridge & Clothier premiums. The first one of which, by the way, was was carried off by Mrs. Rebecca Taylor, (mother of the late Bayard Taylor,) who is over 82 years of age, and a sufferer from paralysis.

"Anyone with sufficient land to grow a few mulberry trees can add the rearing of silk worms to the daily care, and find it a source of pleasure and profit. The work occupies but a small portion of the year, and a child can attend to the daily gathering of leaves and feeding the worms. If a supply of mulberry leaves cannot be had, an osage orange hedge will answer every purpose. The osage orange leaf is admirable food for the silk worms, from which they spin splendid silk.

"A very interesting event of national interest, connected with this subject of silk culture, has just occurred in Philadelphia. The Women's Silk Culture Association selected silk from twenty-six families living in fourteen States; had it spun on a "Yankee" reel, made into a web of twenty-eight thousand threads of silk, and woven as a brocade on a Jacquard loom, requiring three thousand six hundred needles to form the original and striking design. This is the first brocade ever woven in America of American silk; and probably the heaviest in texture of any

brocade ever woven. It is known as the Garfield dress, as it is the intention of the association to present this magnificent fabric to Mrs. James A. Garfield."

There was held a successful (though the first,) exhibition of American silk raising, in New York, last month, under the auspices of the North American Silk Exchange. At this exhibition were cocoons, silk spinning, weaving, &c., in all stages. I give what the Baltimore *Sun* says of the Silk Fair:—

"The exhibition of cocoons were from the Agricultural Department at Washington, from Mississippi, Louisiana, Texas, Alabama, Tennessee, Kentucky, Nebraska, Utah, Pennsylvania, New Jersey and New York. A loom was set up in the hall on which silk handkerchiefs were woven, and samples of American silk added to the beauty and interest of the display. The manufacture of silk goods has already become a flourishing industry in this country, and the effort now making to encourage the raising of cocoons as a household industry is very commendable. From the report of President Smith, of the Silk Exchange, we gather that last year there were twenty-five thousand persons engaged in silk culture in the United States. He predicted that next year the number would be doubled. The exhibition now open, he said, meant that thirty-five million dollars annually sent abroad to bring back raw silk to feed the three hundred and twenty-five American silk mills would be kept at home to feed the wives and children of overworked farmers and sons of toil. Silk culture would enable every woman, child and old man to become a producer. The remuneration is comparatively small, but the labor of feeding the worms is light, and it is possible in country households where there are children, to add to the family income, with diligence, from one hundred to two hundred or more dollars a year.

Domestic Recipes.

DESSERTS FOR A "COMPANY SUPPER."

Use the proportion of three bananas to five oranges, after removing the skins, slice them, and put them in layers in a glass dish, adding a sufficient amount of sugar to each layer. When this is done, pour over the whole about half a cup of cold water, and let it stand three hours before eating. To make it still more delicious you can add pineapple sliced very thin, and pour grated cocoanut over the whole. This reads like a very expensive dish, but it is not so.

Having the four kinds of fruit, you need but little of each one. This is the cost in Chicago: Three bananas, 10 cents; five oranges, 8 cents; one pineapple, 20 cents; one cocoanut, 5 cents; total 43 cents. Cheap enough you will say, after eating it.—*Farmer's Review*.

DELICIOUS GRAHAM MUFFINS.—Add two beaten eggs to one pint of milk; stir in two cups of Graham flour and one teaspoonful of baking powder. Bake in a quick oven 15 minutes. These are made very quickly.

HUCKLEBERRY BREAD.—To one and one-half cups of sugar, add one cup of milk, one cup of yeast, a little salt, and flour enough for a thick batter. When this is light and foamy, stir in four well beaten eggs, a cup of melted butter and nearly or quite a quart of huckleberries, which have been first sprinkled with flour to prevent their sticking together. Then stir in more flour till it is as thick as ordinary fruit cake. Bake from 20 to 30 minutes in square pie tins. It should be about an inch thick when it goes into the oven, and ought to rise to two inches in thickness. Eat hot; split open and butter it. It should be thick with berries. If a small cake of compressed yeast is used, it will rise in two hours and a half; if home made yeast, the batter should be "set" about ten o'clock in the morning, if you would want it for a "tea cake." Try this.

TIP-TOP PUDDING.—One pint of bread crumbs, quart of milk, one cupful of sugar, the grated peel of a lemon, yolks of four eggs, a piece of butter the size of an egg. Bake. When done, spread fresh strawberries over the top, (or if not in season for strawberries use a cupful of preserved raspberries,) put over that a meringue made with the whites of the eggs, a cupful of sugar and the juice of one lemon. Return it to the oven to color. Let it partly cool and serve it with rich cream.

PEPPER MANGOES.—Put three dozen green peppers into a strong brine for four days, placing a weight upon them to keep them under the brine. Cut a slit in each one and with a sharp knife remove the seeds and let them drain. Chop two heads of cabbage very fine, and scald it with boil

ing brine. Squeeze it dry and add to it half an ounce of celery seed, half a pound of mustard seed, and two cloves to each pepper as full as they will hold with the cabbage, &c., putting the cloves in with it. Tie a string around each one and pack them in a large stone jar. Add as much cider vinegar as will cover them, a table spoonful of allspice, three blades of mace and half a cup of brown sugar. Pour it boiling hot over the mangoes and tie them up closely, and do not open them for two months.

GOOSEBERRY JAM.—This is made pretty much as other jams, but I will tell my sister housekeepers how I make a mixed article of gooseberries and raspberries. I use either the full-grown green or the ripe fruit. I put no more water in the preserving pan than will prevent the fruit from burning and boil until they have burst and are tender, then add a pound of sugar to each pound of gooseberries, and boil, say half an hour or so, until done enough. Put the jam in jars, and after leaving open for twenty-four hours, seal up tightly. The gooseberry jam imported from England, and to be found at many of our best grocery stores, is a choice article, but no better than we can prepare ourselves, only that the fruit in England is twice as large ours.

But there is another jam which I think better than this. It is a mixture of gooseberries and raspberries, a pound of raspberries to a half pound of gooseberries. Boil the gooseberries as before, and then add the raspberries for a pound of fruit, and simmer until done, gently stirring to mix thoroughly.

CRAB SALAD—Take the picked meat of twelve boiled crabs, or one well drained can of crab meat. Set this away to become cold, then arrange it upon a bed of crisp, tender lettuce. Work quarter of a pound of butter to a cream, then add the well beaten yolks of four eggs, a desert spoonful of mustard powder, cayenne pepper and salt to taste. Mix these ingredients well together, then stir the mixture over the fire, and add vinegar until it is as acid as you wish it. Continue to stir it until it thickens like boiled custard, then remove it from the fire and set it away to become thoroughly cold. The dressing must not be poured over the salad until the time of serving it.

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